SELF-HELP DEVICES FOR
REHABILITATION

by

Institute of Physical Medicine
and Rehabilitation

HV 3011
I

c.1

SELF-HELP DEVICES

FOR

REHABILITATION

NEW YORK UNIVERSITY - BELLEVUE MEDICAL CENTER
INSTITUTE OF PHYSICAL MEDICINE AND REHABILITATION
400 EAST 34TH STREET, NEW YORK 16, N. Y.

HV3011
I

FOREWORD

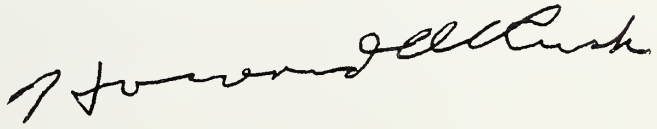
The Institute of Physical Medicine and Rehabilitation of the New York University-Bellevue Medical Center, under a grant from the National Foundation for Infantile Paralysis, is engaged in a study of self-help devices for the handicapped for the purpose of disseminating knowledge to hospitals, physicians and patients. The study embraces all such devices that can be found by research in medical libraries, by letters to hospitals, clinics, rehabilitation centers and the United States Patent Office, by search in shops and in mail order catalogues, and from the suggestions of patients and the co-operation of individual physicians and private persons.

In this manual, some of the devices and gadgets already discovered, and tested by patients at the Institute or elsewhere, are pictured and described. Not all of these devices are of equal importance or of equal value, nor is it to be inferred that any patient would be wise to procure every item set forth as usable by someone with a disability similar to his own. The intention of these pages is rather to make available knowledge of all existing inventions and discoveries in the field, in the hope that everyone may find something from which he can derive greater independence, efficiency, or comfort.

Devices have been classified according to their purpose and analyzed by their possibilities either for use in the activities of daily living or for therapeutic purposes. Of these, further divisions have been made in accordance with the outline following.

Braces and prosthetic devices have not been considered in this study, inasmuch as they are to be prescribed by the physician and are made to specification.

It is hoped that the efforts of those engaged in the use and development of self-help devices will find resource and be given additional impetus from information on the latest developments in the field, made possible through present and future contributions. Contributions will continue to be received as long as the study is in progress. Further reports can be obtained upon request without cost from the Institute of Physical Medicine and Rehabilitation, 400 East 34th Street, New York 16, N. Y.



HV 3011
I
cop. 1

VORWORT

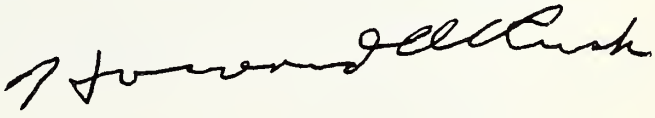
Eine wissenschaftliche Studie ueber mechanische Selbst-Hilfs-Apparate fuer koerperbehinderte Patienten wird am "New York University-Bellevue Medical Center Institute of Physical Medicine and Infantile Paralysis gemacht. Diese Arbeit bezweckt Information an Spitaeler, Aerzte und Patienten weiterzuleiten. Die Selbst-Hilfs-Apparate mit denen sich die Studie befasst koennen auf die folgende Weise gefunden werden; in wissenschaftlichen Arbeiten in medizinischen Bibliotheken; durch Korrespondenz mit Spitaelern, Kliniken, Rehabilitation Institutionen und dem Amerikanischen Patent Amt: durch Suchen in Geschaeften und in Postversand Katalogen; durch Vorschlaege von Patienten und durch die Zusammenarbeit von individuellen Aerzten und Privat-Personen.

In dem vorliegenden Handbuch sind einige der Selbst-Hilfs-Apparate und Vorrichtungen, die von Patienten erfunden und bereits ausprobiert wurden, beschrieben und illustriert. Diese Vorrichtungen sind weder alle von gleicher Bedeutung noch sind sie alle gleich nuetzlich. Es waere falsch den Schluss zu ziehen, dass ein gegebener Patient sich jede dieser Vorrichtungen anschaffen sollte, nur weil sie einem andern Patienten mit einem aehnlichen "handicap" von Nutzen waren. Dieses Handbuch bezweckt ausschliesslich Information ueber die existierenden Erfindungen und Entdeckungen auf diesem Gebiete weiterzugeben, in der Hoffnung, dass sich fuer jeden Patienten etwas finden wird, das ihm mehr Unabhaengigkeit, Leistungsfaehigkeit und Bequemlichkeit gewaehrleistet.

Die Selbst-Hilfs-Apparate sind nach ihrer Zweckmaessigket im taeglichen Leben ("Activities of Daily Living") oder fuer Heilzwecke klassifiziert. Die Gruppen sind in Untergruppen eingeteilt analog mit dem Schema in diesem Handbuch.

Wir hoffen, dass alle die am Gebrauch und der Entwicklung dieser Selbst-Hilfs-Apparate arbeiten und interessiert sind, neue Anregungen in der Information ueber die letzten Entwicklungen auf diesem Gebiete finden werden.

Weitere Berichte koennen kostenlos auf Ansuchen vom Institute of Physical Medicine and Rehabilitation, 400 East 34th Street, New York 16, New York erhalten werden.



Digitized by the Internet Archive
in 2015

https://archive.org/details/selfhelpdevicesf00newy

AVANT PROPOS

Sous un concession de la Fondation Nationale Contre la Poliomyelite, l'Institut de Rééducation de New York University-Bellevue Medical Center s'est engagé dans une recherche des devises speciaux pour les invalides avec l'intérêt de disseminer cet information aux hôpitaux, aux médecins et aux malades. Cet étude comprend tous de tels devises qu'on peut trouver par recherche dans des bibliothèques medicaux, par lettres aux hôpitaux, aux cliniques, aux centres de rééducation, a l'Office des Brevets des Etats-Unis, par cherchant dans des magasins et dans des catalogues, et par les inspirations des malades et la cooperation des médecins individuels et des persons prives.

Dans ce manuel des devises, déja inventés et essayés par des malades de l'Institut et par ailleurs, sont décrits et illustrés. Point de tous ces devises sont d'un importance égal ni d'un valeur egal et c'est n'est pas a dire qu'une malade sera prudente d'obtenir chaque article montré connue employable par quelqu'un avec une impuissance pareille. L'intention de ces pages est plutôt de faire disponible a tous, la connaissance de tous les inventions existantes, dans l'espoir que tout le monde peut trouver quelque chose de quoi achever une plus grande mesure d'indépendance ou de confort.

Ces devises ont été classés selon leur but et elles sont analysés par leur possibilites ou pour usage dans les activités de la vie quotidienne ou pour les buts therapeutiques. De celles-ci des nouvelles distinctions sont faites conformément a l'esquisse suivante.

On n'a pas tenu compte des devises prosthetiques, etcetera, dans cet etude d'autant que c'est le medecin qui les fait ordonner et qu'elles sont faites a specification.

C'est l'espérance que les efforts de ceux-la engagés dans l'emploi et le developpement de tels devises trouveront la ressource et la force additionnel d'information sur les developpements les plus recentes fait possible par des contributions actuelles et futures. Des contributions continueront tant que cet étude continuera. Il est possible d'obtenir des nouveaux rapports sur demande et sans frais de l'Institute of Physical Medicine and Rehabilitation, 400 East 34th Street, New York 16, New York.

Howard A. Rusk

INTRODUCCION

El Instituto de Medicina Fisica y Rehabilitacion de la Universidad de Nueva York-Centro de Medicina de Bellevue, bajo un fondo de la Fundacion de Paralisis Infantil, esta estudiando aparatos para ayuda del invalido con el proposito de diseminar estos conocimientos a hospitales, medicos y pacientes. Este estudio cubre todos los aparatos que se pueden encontrar por medio de medicina, cartas a clinicas, centros de rehabilitacion, y la oficina de Patentes de los Estados Unidos, y de las sugestiones de pacientes y la cooperacion de medicos individuales.

En este manual, algunos de los aparatos y utensilios ya descubiertos, y probado por los pacientes del Instituto y en otras partes, estan ilustrados y describidos. Todos estos aparatos no son de igual valor o importancia y no son usables con todos pacientes teniendo inhabilidades semejantes. El proposito de estas paginas es el hacer disponible esta informacion sobre las invenciones y descubrimientos en este estudio, con la esperanza que todo el mundo podra encontrar algo de que el pueda adquirir mas independencia, eficiencia, y comodidad.

Aparatos se han clasificado de acuerdo con su intencion y estan analizados de acuerdo con su uso en ensenando las actividades de la vida diaria o para propositos terapeuticos.

Aparatos ortopedicos no se han considerados en este estudio porque ellos se recetan por el medico y se hacen a la orden.

Se espera que los esfuerzos de esas personas participando en el uso de estos aparatos encontraran recursos y adquiriran impetus de la informacion de estos desarollos ultimos en este estudio que se ha hecho posible por contribuciones. Contribuciones se continuaran a recibir durante la continuacion del estudio. Reportes adicionales se pueden obtener por medio de correspondencia, sin costo del Institute of Physical Medicine and Rehabilitation, 400 East 34th Street, New York 16, N. Y.

FUNCTIONAL DISTRIBUTION OF DEVICES

I. Activities of Daily Living

II. Therapeutic Exercise

III. Industrial Aids (pending)

I. ACTIVITIES OF DAILY LIVING

A. Self Care

1. Dressing
   a. underclothes and night clothes
   b. outerclothes and overclothes
   c. footwear
   d. accessories

2. Toilet Activities
   a. personal appearance
      1) care of hair
      2) care of nails
      3) use of cosmetics
      4) care of teeth
   b. personal hygiene
      1) tubs
      2) showers
      3) basins
      4) shaving equipment
      5) cleaning equipment
   c. elimination
      1) toilets
      2) commodes
      3) bedpans
      4) urinals

3. Eating
   a. tableware
   b. dishes
   c. tables

4. Bed (and attachments)

B. Communication

1. Signal bells

2. Telephone and attachments

3. Writing and typing

4. Reading

C. Transfer and Travel

1. Wheel chairs
2. Automobiles
3. Trains
4. Buses
5. Bicycles

D. Household Equipment

1. Kitchen
   a. cooking
   b. dishwashing
2. General Housekeeping
   a. cleaning
   b. storage
   c. special lighting (movable)
   d. fastening
   e. furniture
   f. laundering

E. House Adjustments

1. Ramps
2. Stairs
   a. rails
   b. gates
3. Elevators
4. Lights (fixed)
5. Special Plumbing
6. Doors and Windows

F. Miscellaneous

1. Reaching
2. Sewing
3. Packaging
4. Smoking
5. Carrying

G. Recreation

1. Games
2. Toys
3. Music
4. Painting

H. Prevocational

II. THERAPEUTIC EXERCISES

A. Increase of Strength, Endurance and Speed

P - Passive
A - Assistive
AR - Active-resistive
without gravity
with gravity
against resistance

1. Neck
2. Trunk
3. Hip
4. Knee
5. Ankle
6. Foot
7. Toes
8. Hallux
9. Scapula
10. Shoulder
11. Elbow
12. Forearm
13. Wrist
14. Fingers
15. Thumb

B. Joint Range of Motion - Elasticity

P - Passive
A - Assistive
AR - Active-resistive
without gravity
with gravity
against resistance

1. Neck
2. Trunk
3. Hip
4. Knee
5. Ankle
6. Scapula
7. Shoulder
8. Elbow
9. Forearm
10. Wrist
11. Fingers
12. Thumb

C. Co-ordination (skills and balance)

1. Finger dexterity

2. Reciprocal motion
   a. upper extremity
   b. lower extremity

D. Locomotion

1. Wheel chairs

2. Walking aids
   a. walkers and skiis
   b. braces
   c. prostheses
   d. crutches
   e. canes

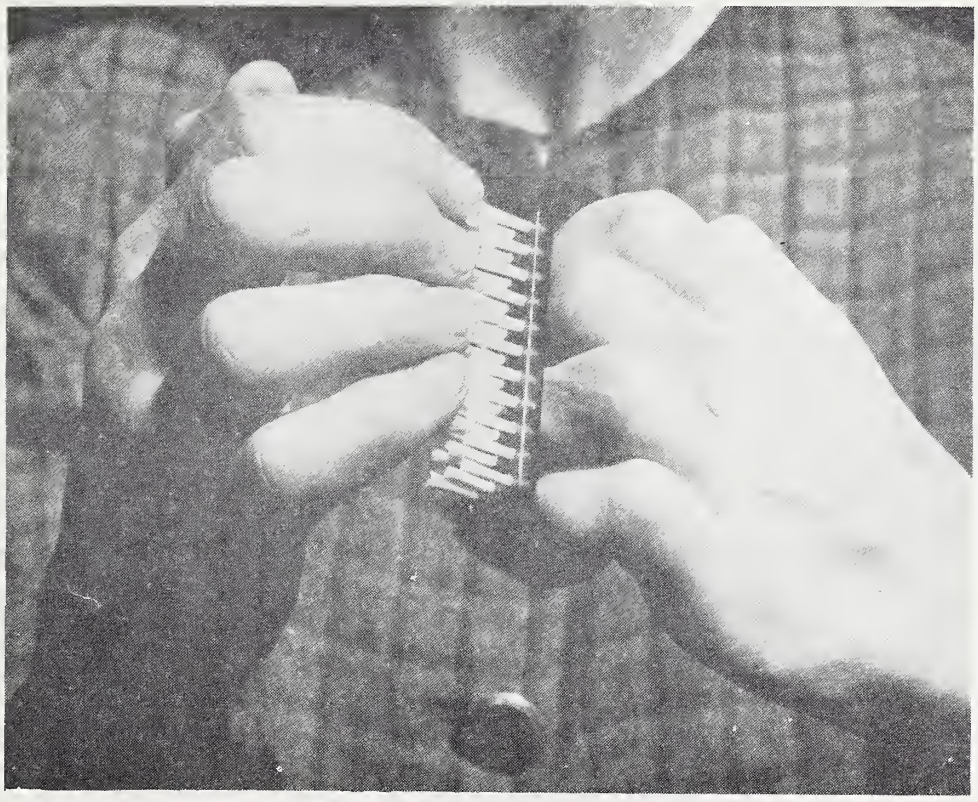
E. Splints

SECTION I.

DEVICES FOR ACTIVITIES OF DAILY LIVING

HAND-CLIP NAIL BRUSH

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Distributors:

Any 5 and 10 store

Price: 15 cents and
25 cents

Description

This is a small brush with extended plastic ends which are curved to fit over the back of the fingers.

Purpose and Use

The brush is used for cleaning nails, hands, etc. in cases where there is use of both hands but not enough strength for sufficient grasp of ordinary brush, as in the polio, or arthritis patient.

SUCTION CUP BRUSH

Submitted by: Madison Artificial Arm Company
395 Linwood Avenue at Main Street
Columbus, Ohio

Source and Cost

Manufacturer:
Madison Artificial Arm Company
395 Linwood Avenue at Main Street
Columbus 5, Ohio

Price:		
	Plastic	$1.00
	Wood	.75

Description

This is a standard surgeon's hand brush, on either wood or plastic back, with two rubber suction cups secured to the back of brush. It can be fastened on any surface, metal, wood, tile, etc., in any location most convenient to use.

Purpose and Use

This device is used for assisting in the washing of remaining hand and arm when person has sustained either temporary or permanent loss of the use of one hand. It is valuable to the amputee, the hemiplegic, and to burn or fracture cases.

DENTURE CLEANER

Submitted by: Mrs. Lilianne E. Rudomin
Department of Occupational Therapy
Physical Medicine and Rehabilitation Service
Bellevue Hospital
New York 16, N. Y.

Source and Cost

Made in Occupational Therapy Shop.

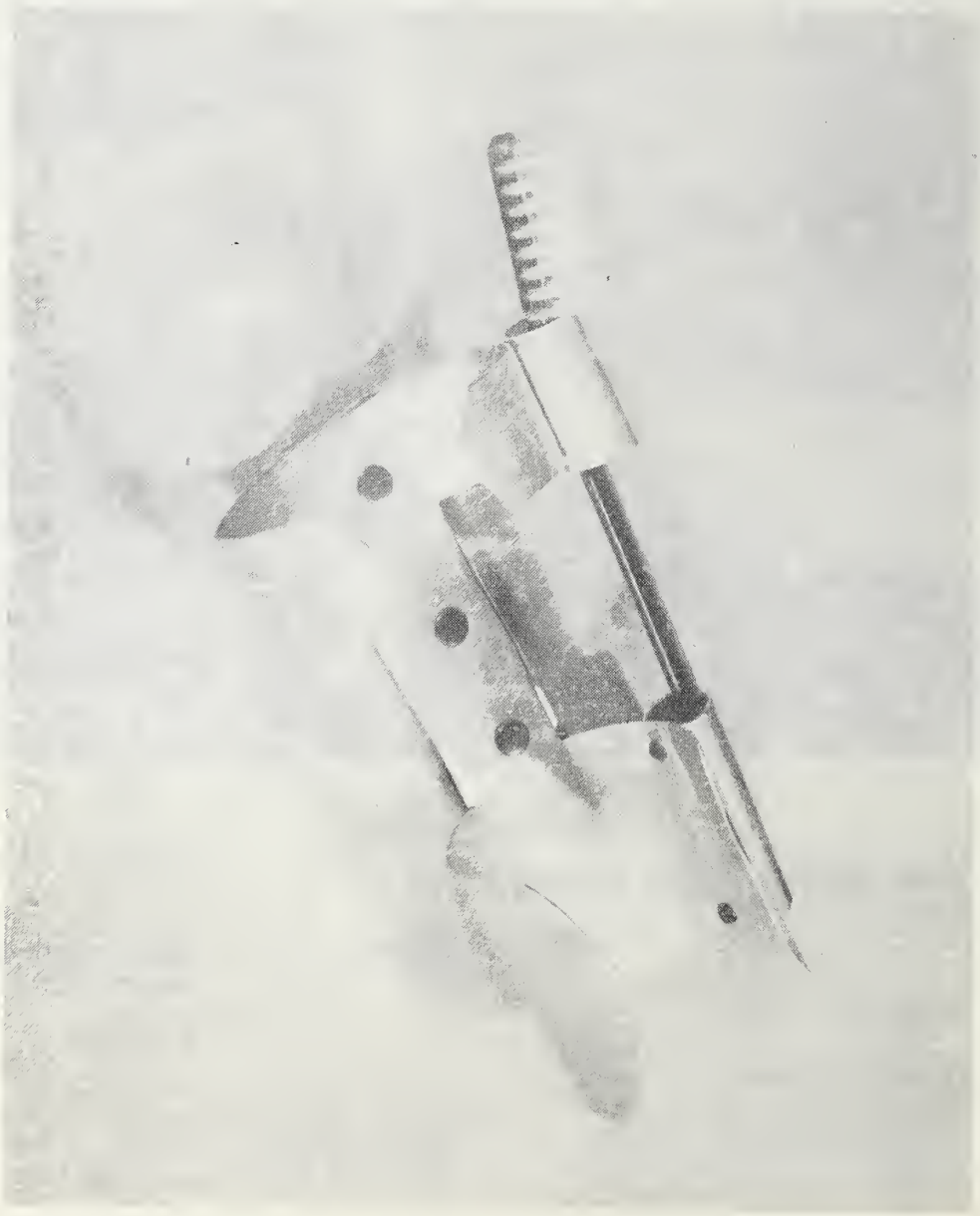
Cost -	Aluminum	approximately 15¢
	Rivets	approximately 10¢

Description

This device consists of a hand clip and a forearm clip connected by a bar on the dorsal surface of the hand, with circular holders for toothbrush attached on each clip at medial side.

Purpose and Use

For an arthritic or flaccid hand, the holder serves to stabilize wrist, substitute for grasp, and allow shoulder motion to be used. By the addition of circular holders on the other side, the device could be adapted for holding other utensils, such as comb or razor.



SHOWER STOOLS FOR AMPUTEES

Submitted by: J. O. White
22 Hawthorne Place
Malverne, Long Island, N. Y.

Source and Cost

Made and sold by:
J. O. White
22 Hawthorne Place
Malverne, Long Island, N. Y.

Price: about $10.00 each

Description

The shower stools are made in three different styles:

1) Low three-legged stool for unilateral B-K amputees *

2) High, open-seat, three or four-legged stool for unilateral A-K amputees *

3) Standard height, open-seat, straight chair without arms, for bilateral amputees, specially designed with extra leg-spread so that it will not tip or skid.

Purpose and Use

Using one of the stools, a unilateral amputee can stand unassisted in the shower, without fear of falling. The open-seat chair allows bilateral amputees to use the shower.

*Height of stool made in accordance with individual specification

SCHICK ELECTRIC RAZOR HOLDER

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street, New York 16, N. Y.

Sources and Cost

Distributors		
Schick Electric Razor Company	Retail price - razor	24.50
Stamford, Connecticut	holder	7.50
	total	32.50

Amputees are allowed a discount of 40 percent, or a net price 19.20
Additional razors are sold at the regular retail price.

Description

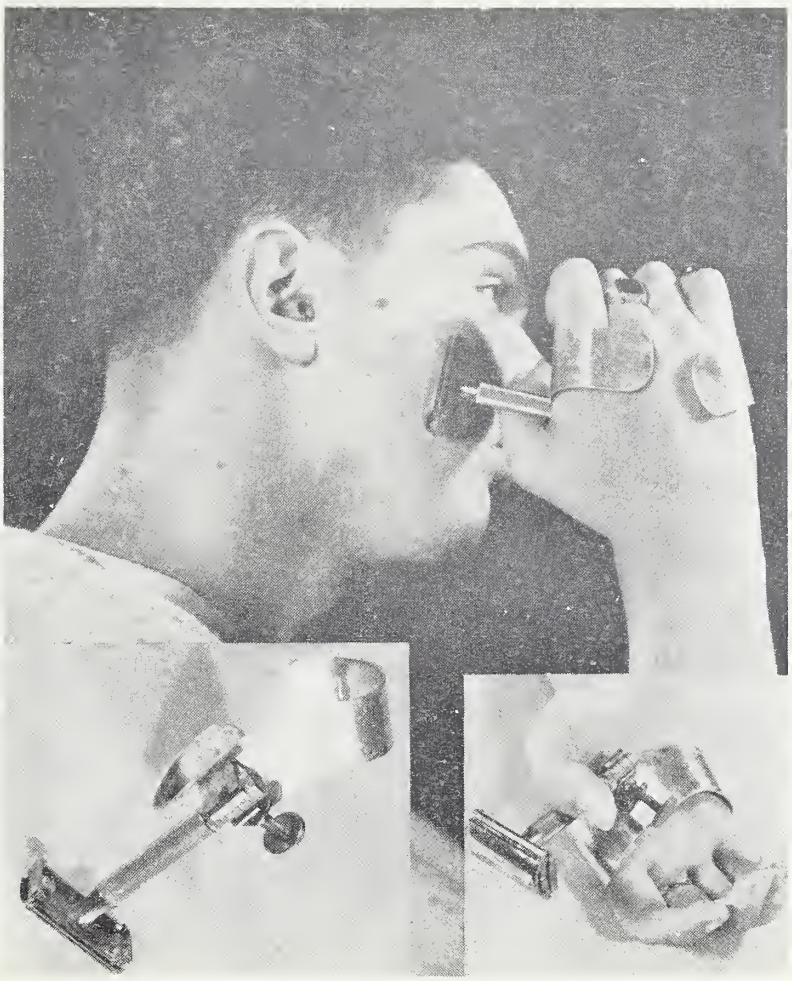
This device is a clamp, or bracket, of metal, designed to hold a Schick electric razor Model 20. It can be connected to an artificial arm by means of a $20\frac{1}{2}$-inch thread connector and will fit all standard arms.

Purpose and Use

The razor holder is designed for use by arm or hand amputees, both bilateral and unilateral, and enables them to shave without assistance. Since it is extremely difficult to lather the face with one or both hands gone, the electric razor, which requires no lather, is by far the best razor for an arm amputee to use.

SAFETY RAZOR HOLDER

Submitted by: Mrs. Lilianne E. Rudomin
Department of Occupational Therapy
Bellevue Hospital
New York 16, N. Y.



Sources and Cost

Made in the occupational therapy shop
at Bellevue Hospital.

Cost approximately 35¢
(aluminum 10¢)
(screw 20¢)
(rivet 15¢)

Description

This device consists of an aluminum hand-piece shaped to fit the hand comfortably and having on the palmar surface a small screw clip (such as is used for intravenous clamps) attached with aluminum rivets.

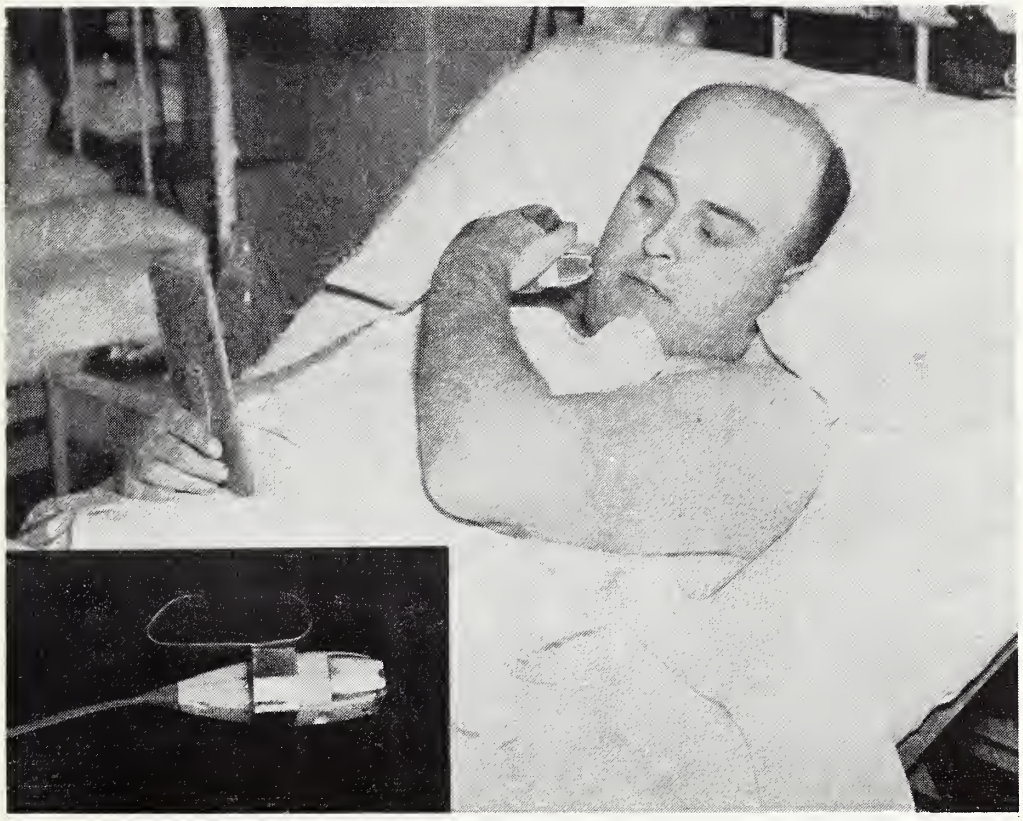
Purpose and Use

The holder is designed to substitute for hand grasp and enable the patient to care for his own shaving needs. It is easily made, inexpensive, easy to keep clean, is not rusted by water, and patient can slip in and out of it himself. It is especially helpful in cases of quadriplegia or of hand weakness caused by poliomyelitis.

ELECTRIC RAZOR HOLDER

Submitted by: Veterans Administration Hospital
Hines, Illinois
Kelso A. Carroll, M.D., Manager
Louis B. Newman, M.E., M.D., Chief
Physical Medicine Rehabilitation Service

Developed in the Occupational Therapy Section of the Physical Medicine Rehabilitation Service in collaboration with the Prosthetic Appliances Unit.



Sources and Cost

Made in the Prosthetic Appliances Unit, Veterans Administration Hospital, Hines, Illinois.

Description

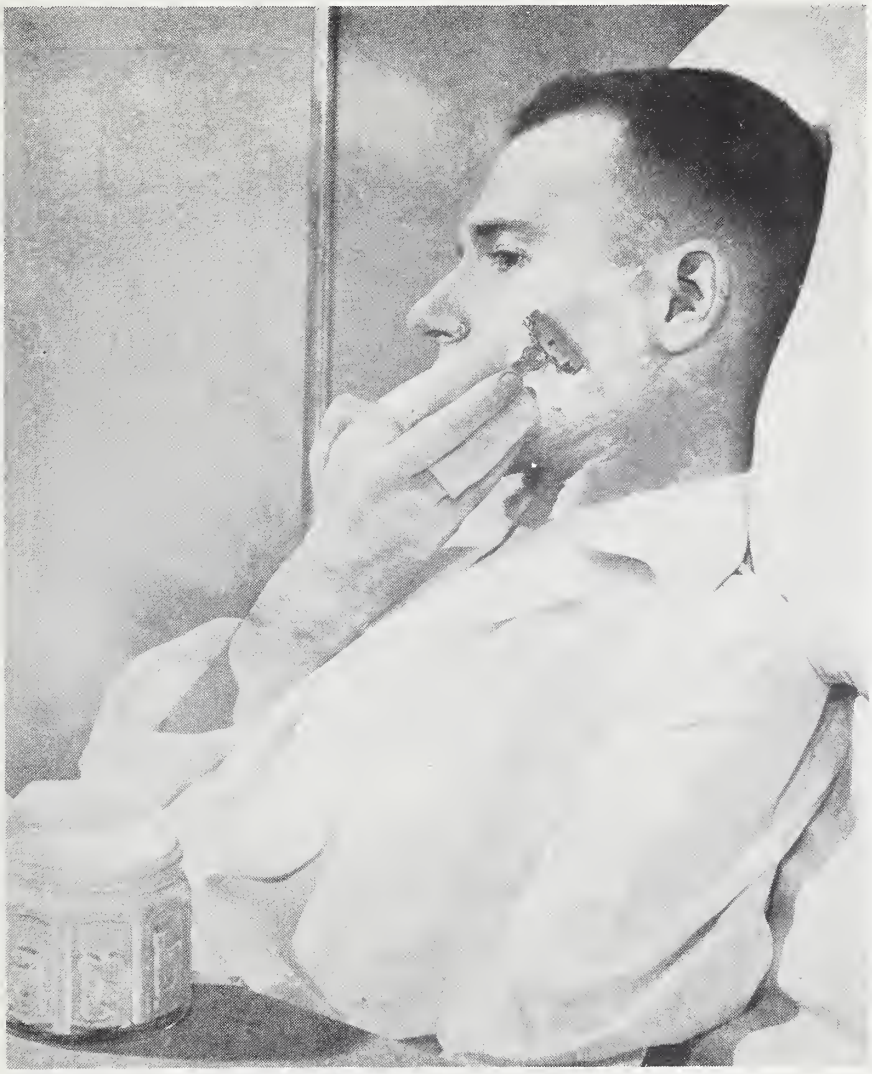
This device is made of two strips of light-weight aluminum, $1\frac{1}{2}$" wide. One piece is formed in the shape of a cuff to fit over the palm of the hand, while the other piece is bent to conform to the shape of the electric razor. The two pieces are then riveted together, as shown in the photograph.

Purpose and Use

With this holder, a man who cannot grasp the electric razor unaided can shave himself when the device is placed over his hand. Persons with paralysis due to poliomyelitis, cervical cord injury, or other neurological conditions involving the hand can benefit from this device. It will be useful also for those with marked limitation of motion in their hands and fingers due to arthritis.

FIBRE GLASS RAZOR HOLDER

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street, New York 16, N. Y.



Source and Cost

Made in our experimental laboratory at the Institute.

Description

The holder is made of Ortho-Ply (a fibre glass) molded to fit under the middle finger and around the first and ring fingers. A light-weight, plastic-handled safety razor is riveted to the inside of the holder, as shown in the illustration below. The patient can put the holder on his hand himself simply by slipping his fingers into the spaces provided.

Purpose and Use

The holder was designed for a poliomyelitis quadriplegia patient. His right hand and arm had little muscle power except for fair flexors of the middle finger and forearm. With the help of this device he was able to shave himself.

AMPUTEE LOIN CLOTH

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Mrs. Grace Huggins
c/o Mrs. B. Drapeau
222 Kearney Avenue
Jersey City, N. J.

Price:

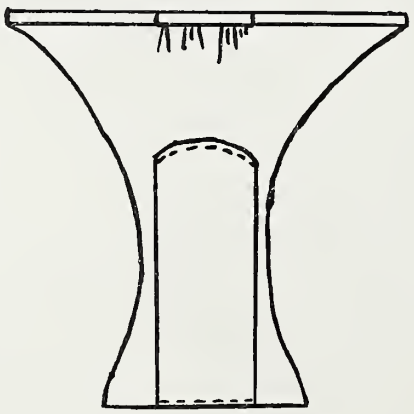
cotton jersey	$3.98
cotton twill	2.49
light nylon	4.59
heavy nylon (moisture proof)	6.59

Description

The garment, or loin cloth, is made in one flat piece (Drawing) and is fastened by means of hooks and a series of eyelets, making it adjustable in size. An inner re-enforcement of soft cotton jersey is added through the center. It is best made up in cotton or woolen jersey, although nylon can be used.

Purpose and Use

The purpose of this garment is to allow complete examination of the amputee in the evaluation clinics. It does not constrict the movement, and it also allows complete presentation with fine visibility of the parts needed to be exposed, without embarrassment to the amputee. It may also be used by the fitter while adjustments are being made to the artificial limb, and by the therapist during walking training. They can then closely observe the fit of the socket and the set of the stump in the socket, the fit of the ischial seat, how the socket fits in the perineal area, and general alignment of limb during walking.



LONG HANDLED SHOE HORN

ELASTIC SHOE LACES

Submitted by: Department of Physical Medicine and Rehabilitation
Bellevue Hospital
New York 16, N. Y.

Source and Cost

Shoe horn: This model was made in the hospital workshop and is not available commercially. Plastic shoe horns 18 inches long can be purchased at

Gimbel Brothers
Broadway and 33rd Street
New York 1, N.Y. Price 1.00

Shoe laces: Cecil Corporation (manufacturer) Price .50 per pair in brown, black or white
307 N. Michigan Avenue
Chicago, Illinois

Description

The equipment consists of a metal shoe horn, soldered to a 22-inch length of 5/8-inch aluminum tubing. Some patients prefer the shoe horn to have some flexibility of movement, in which case it may be attached to the rod with a ball and socket joint. If used by patient wearing a zipper-fastened shoe, the other end may be fashioned so as to form a small hook to open and close zipper.

Purpose and Use

This shoe horn is designed to facilitate putting on shoes when the patient is unable to reach his feet, as in the case of fused hips or fractured hips. If used with elastic shoe laces or the zipper shoe, also shown in the illustration, the patient is able to put on shoes entirely unassisted.

CLIP-ON TIES

ESQUIRE TIE CLASP

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Ties: Almost any department store

Price: bow - from 59 cents
four-in-hand - from 1.00

Tie clasp: Madison Artificial Arm Co.
395 Linwood Avenue at Main St.
Columbus 5, Ohio

Description

These are ordinary men's bow and four-in-hand ties, having on the back, behind the knot, metal clips that can be inserted under the collar. The tie clasp has spring clips on both ends.

Purpose and Use

The purpose of ties and clasp is to enable one-armed amputees, or those having the use of only one arm such as the polio, hemiplegia or arthritis patient, to put on their ties unaided.

LONG-HANDLED COMB

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made in the workshop.

Aluminum rod - cost negligible

No. 104 Nylon Stanite Curl Comb - Stanley Home Products, Inc.
Westfield, Mississippi

Price: 35 cents

Description

The handle is made from a 24-inch length of 3/8-inch hollow aluminum tubing. The rod is bent about 4 to 5 inches from the end, to form a right angle. The end of a rat-tailed comb, made of either nylon or hard rubber, is inserted into the rod. A word of warning is given against using plastic rod or comb as they do not hold up.

Purpose and Use

The long-handled comb is designed to enable those patients who have limitation of shoulder and elbow flexion, such as the arthritic, to comb their hair. It can also assist polio myelitis or quadriplegia patients who have weakness of shoulder or elbow flexors; if accompanied by weak finger flexors, a built-up handle may have to be added.

ZIPPER BACK FOR WHEEL CHAIR

Submitted by: Department of Physical Medicine and Rehabilitation
Bellevue Hospital
New York 16, N. Y.

Source and Cost

Distributor:
Any Everest & Jennings wheel chair distributor

Zipper back as accessory included with wheel chair when purchased	Price:	6.00
Zipper back as replacement		13.50

Orders should specify zipper placement on left or right side.

Description

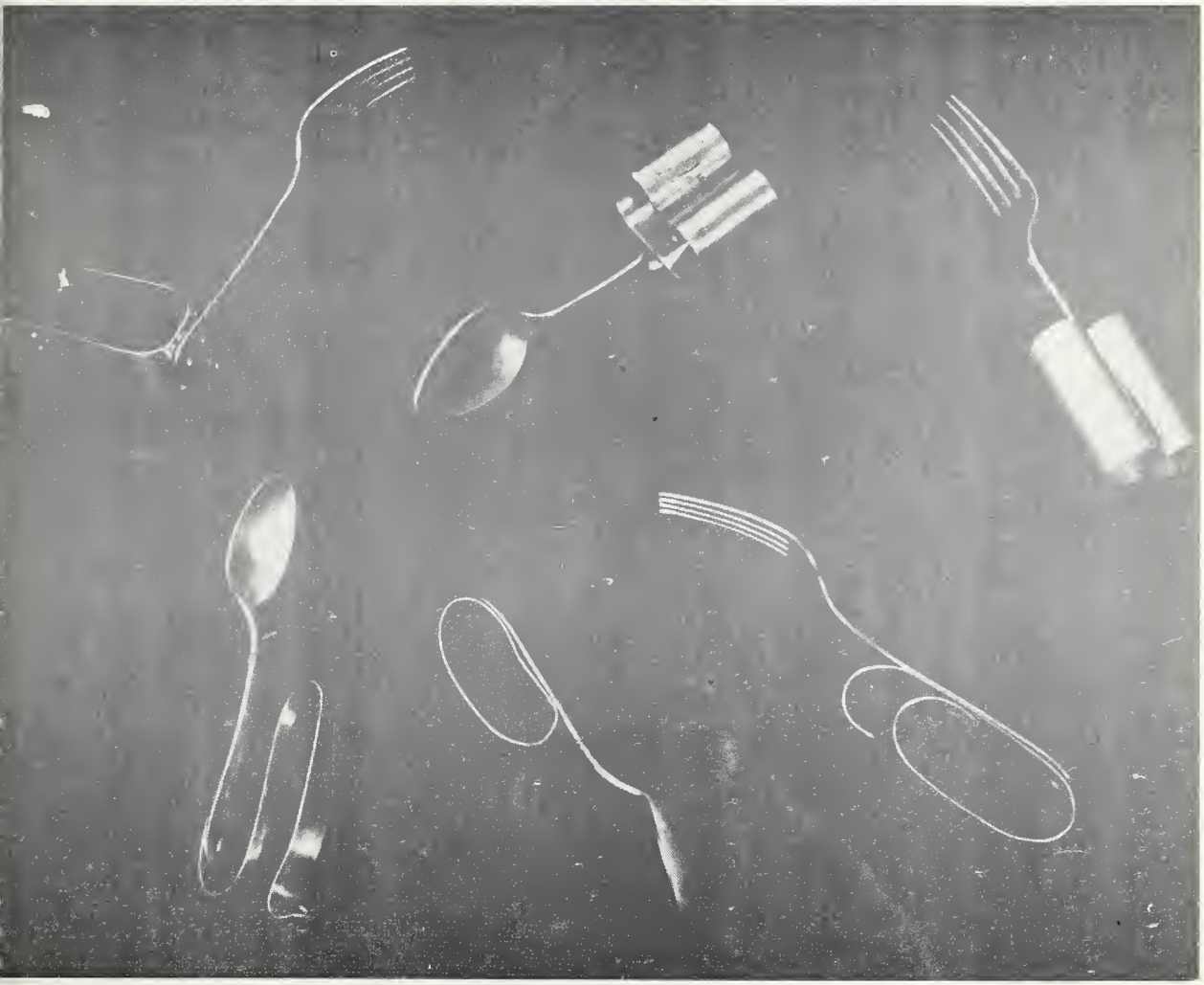
A zipper fastener is inserted at one side of the leather back-piece of a wheel chair to permit patient to open the back completely.

Purpose and Use

When the back of the wheel chair has been virtually removed, the patient is able to slide on to the seat of toilet or commode. This method of self-care is possible for certain patients whose disability is confined to the lower part of the body, as in the case of paraplegia and of some polio patients.

ADAPTED EATING UTENSILS

Submitted by: Physical Medicine Rehabilitation Service
Veterans Administration Hospital
Richmond, Virginia



Source and Cost

Made in workshop at the Veterans Administration Hospital, Richmond, Virginia

Description

Conventional spoons and forks are adapted for special use by attaching metal strips of various shapes and sizes, as shown in photograph.

Purpose and Use

The adapted spoons and forks are used to facilitate eating for patients who have weakness or loss of grasp, or general weakness of hands and arms. They are usable in various positions, since the metal pieces are so attached that the utensils will accommodate hand and arm during feeding motions even when these motions and the grasp vary from the normal.

CELASTIC KNIFE HOLDER

Submitted by: Occupational Therapy Department
Physical Medicine and Rehabilitation Service
Bellevue Hospital
New York 16, N. Y.

Source and Cost

Made in Occupational Therapy Workshop at Bellevue Hospital.

Celastic and straps - cost negligible

Knife-fork combination made by
Lamson & Goodnow Manufacturing Company
Shelburne Falls, Massachusetts

Distributed by
Winkley Artificial Limb Company
90 Fifth Avenue
New York 11, N. Y. Price 3.00

Description

The device consists of a strip of celastic, extending from finger tips to about two inches below the elbow and molded in a cock-up position, as shown in illustration. Two small strips of celastic are molded to the under side in such a way as to form loops to admit the handle of the knife. (The handle should fit snugly in the loops.) The splint is held in position on the arm by means of several straps.

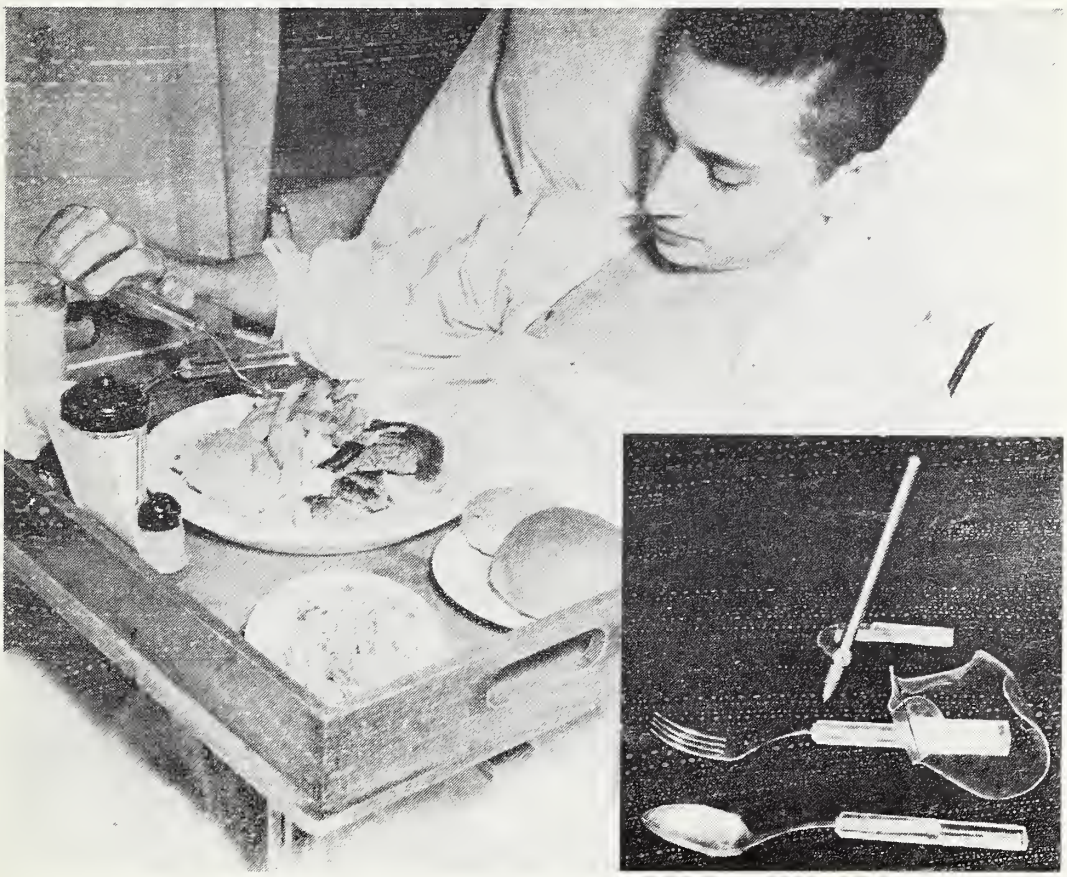
Purpose and Use

The splint, with knife attachment, permits the patient with loss of grasp due to cervical cord injuries or to arthritis to cut food unassisted. The knife-fork combination, shown in the illustration being used as a knife, enables a patient with the use of only one arm to cut his food.

PLASTIC PALM FOR EATING AND WRITING

Submitted by: Veterans Administration Hospital
Hines, Illinois
Kelso A. Carroll, M.D., Manager
Louis B. Newman, M.E., M.D., Chief

Developed in the Occupational Therapy Section of the Physical Medicine Rehabilitation Service in collaboration with the Prosthetic Appliances Unit.



Sources and Cost

Made in the Prosthetic Appliances Unit, Veterans Administration Hospital, Hines, Illinois.

Description

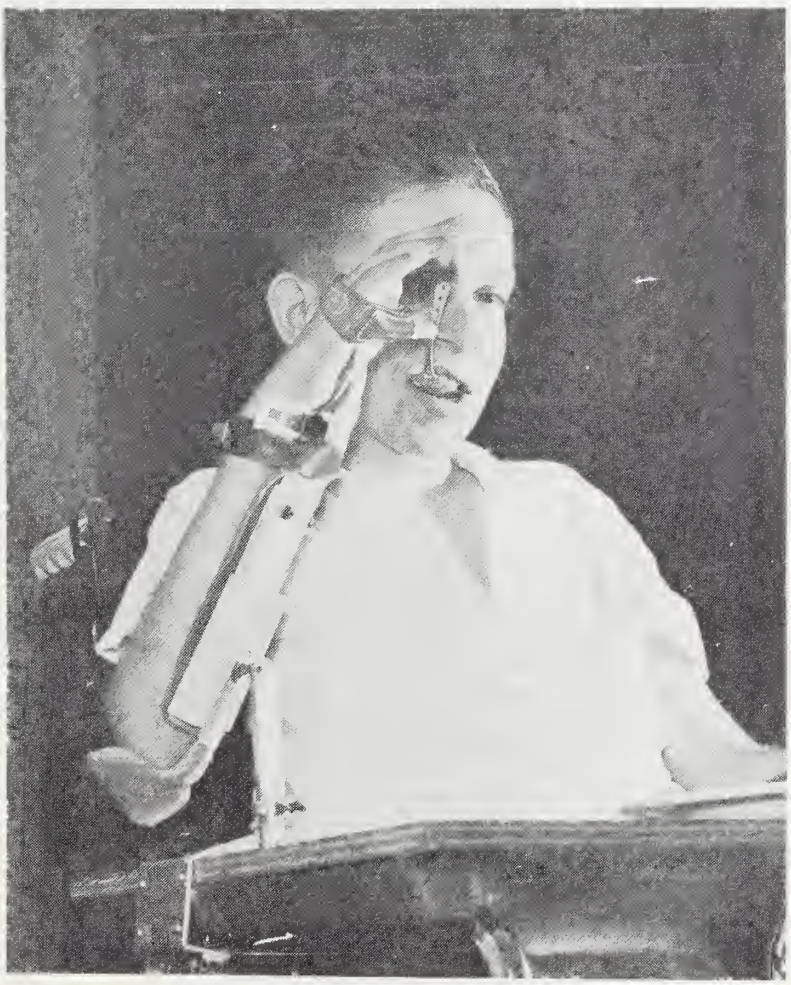
This device is made of a sheet of plastic 1/8 inch thick, molded to fit the palm of the hand. Attached to the under side of this sheet is a plastic compartment into which the specially shaped handles on the eating utensils, or a pen or pencil, are inserted.

Purpose and Use

This device is suitable for persons having incomplete or insufficient grasp, particularly those who have had poliomyelitis of the arms and hands or who have paralysis due to cervical cord injury or other conditions affecting the fingers. In addition, persons with marked limitation of motion in hands and fingers due to arthritis can also benefit by its use.

FEEDING SPLINT
(revision of original model)

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Designed in Device Workshop at the Institute of Physical Medicine and Rehabilitation.

Models may be obtained from:
Adjustics, Inc.
628 East 67th Street
New York 21, N. Y. $34.50 F.O.B.

Accessories (shown in inserts on working drawing) are extra.

Description

A working diagram for the rocker splint is shown on the next page. The top part consists of four pieces (A, B, C, D) cut from a 1/6" 3 S half hard aluminum sheet. A and B are attached to part C with small round head bolts and nuts - the slots in A and B providing adjustment to arm length. The center section C slides in piece D, permitting arm support to be adjusted on supporting stand as needed for point of balance for weight of arm and also for strength of movement. If downward movement is easiest, slide support more to front. The ball end of adjustable support E is cut from $1\frac{1}{4}$" round aluminum bar and hinged to top piece of tubing by a rivet through the ball and tubing; the bottom flange of E is also cut from $1\frac{1}{4}$" round aluminum bar - the bottom piece of tubing is slipped through and the ends flared to secure it in place. The supporting stand E is riveted at top to under side of piece D and at bottom to piece F. The base, F, is cut from 1/8" aluminum sheet, or two pieces of 1/16" aluminum sheet riveted together.

There are three adaptations which have proved helpful:

1) One (Insert 1 on working diagram) is the addition of a 3/4" wide piece of .008 tempered blue spring steel attached to hand piece under the wrist to give assistance to supination or pronation.

2) Another (Insert 2 on working diagram) is the addition of two small springs, attached by strings from piece D to E, to help prevent the sudden jolt which sometimes occurs at the end of each forward and backward tilt. The springs should be adjusted so as to come into play only at the end of each movement. Most individuals will attain sufficient control not to require this, but it may prove helpful to a few.

3) A third (Insert 3 on working diagram) is a stop pin to control amount of rotation in horizontal plane.

Purpose and Use

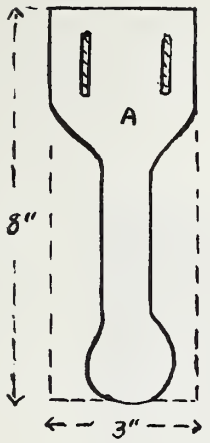
This device is an improved model of the original design shown in previous issues. It is similar to models designed and used in other treatment centers. The changes were made so as to provide a basic unit which could be easily adjusted to fit each individual user.

The device was designed to enable the poliomyelitis patient with two flail arms to feed himself. By means of shoulder movements the arm is able to tilt the trough backward and forward, thus raising and lowering spoon or fork between plate and mouth. While the action results primarily from shoulder movements, it allows the biceps and triceps to assist if there is any muscle power remaining, thus providing exercise to encourage any return or increase of muscle function.

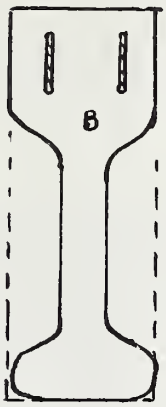
WORKING DIAGRAM

Scale, ¼" = 1"

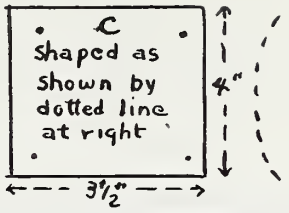
HAND PIECE



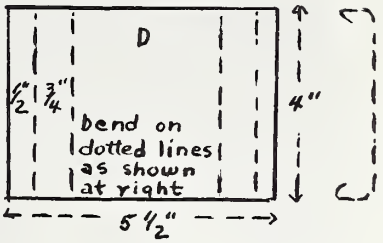
ELBOW PIECE



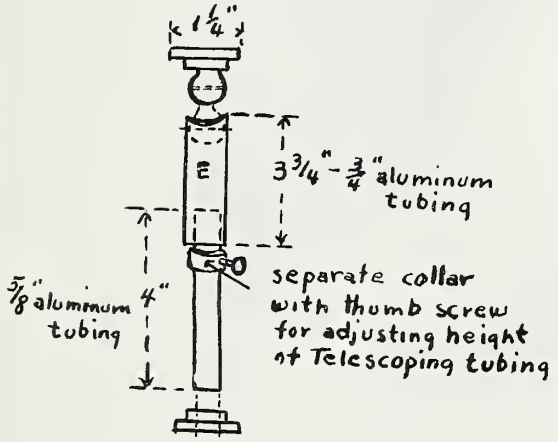
ARM PIECES

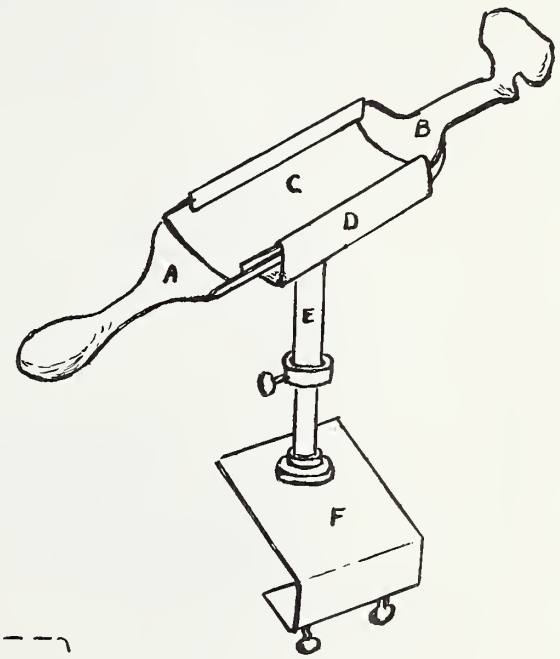


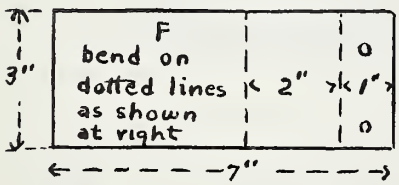
A, B, C, D - cut from 1/16" aluminum sheet

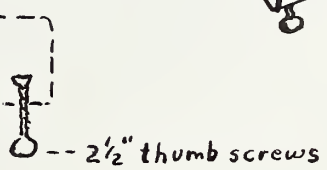


ADJUSTABLE SUPPORT



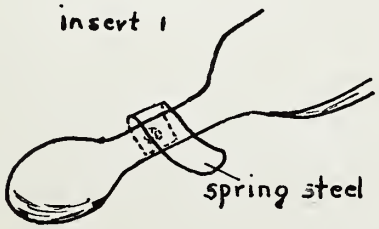




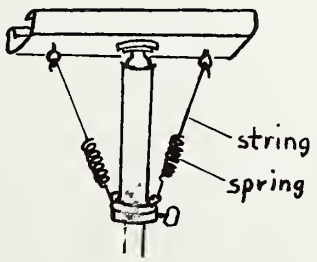


BASE - to clamp on table or wheel chair arm (cut from ⅛" aluminum sheet)

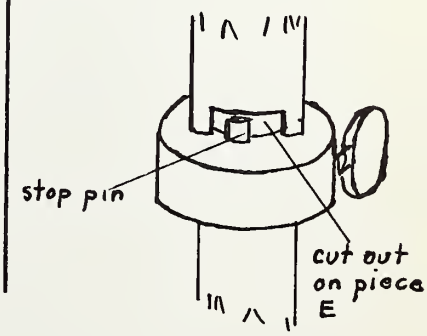
insert 1



insert 2.

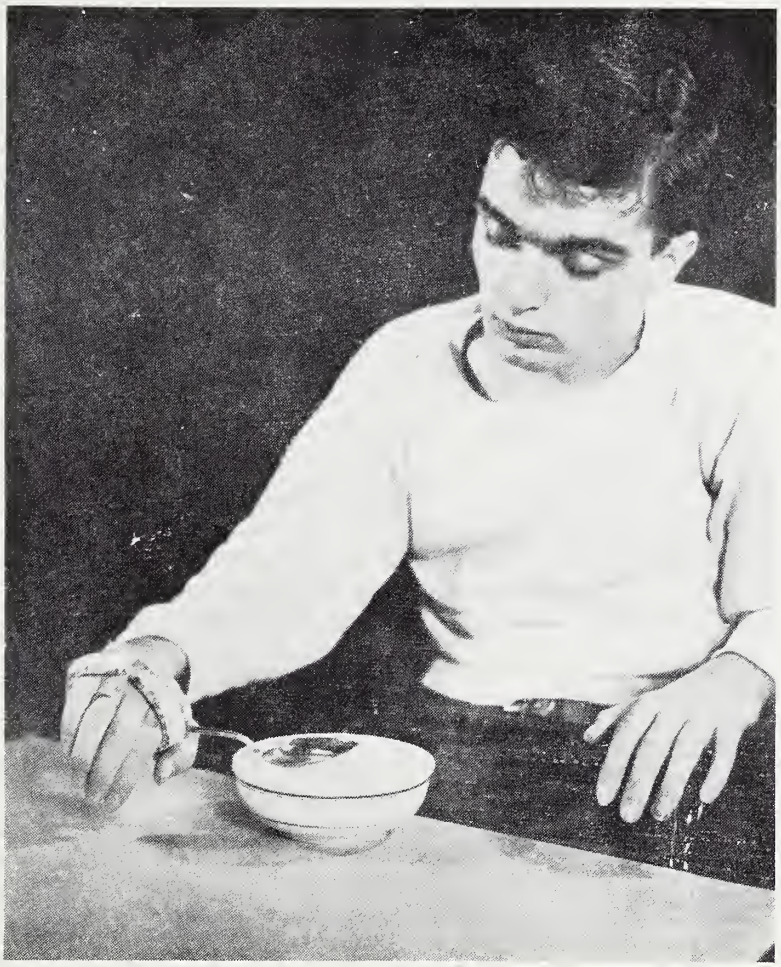


insert 3.



HAND CUFF

Submitted by: Physical Medicine and Rehabilitation Service
Bellevue Hospital
New York 16, N. Y.



Source and Cost

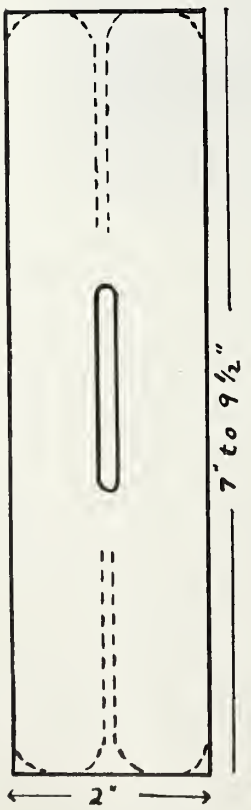
Made of scrap materials.

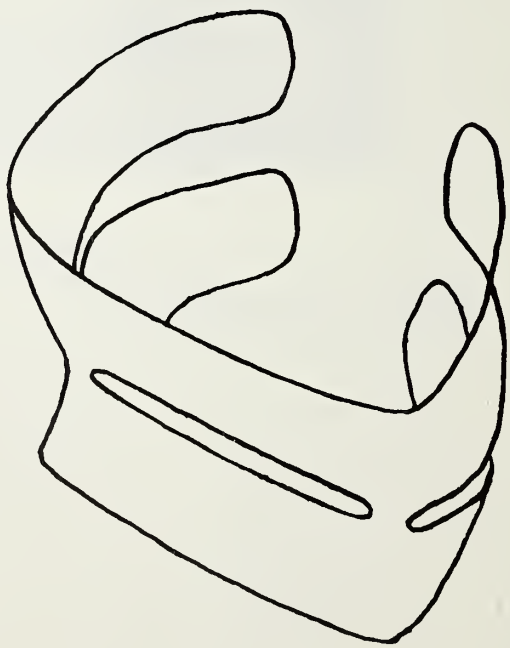
Description

This device is a piece of sturdy but pliable metal, about 7 to $9\frac{1}{2}$ inches long, depending upon size of hand, and 2 inches wide. The strip is slit down each end in the middle to about $1\frac{1}{2}$ inches from the center, and has an opening about 2 by $\frac{1}{4}$ inches in the center (as shown in working diagram) to facilitate the concave bending to fit palm of hand. The divided ends are curved around to fit the back of the hand. The whole piece is covered with a moleskin adhesive, or any other suitable material, to protect the hand.

Purpose and Use

The hand cuff is used to permit the holding of eating utensils, toothbrush, comb, etc., when the patient has not sufficient power to grasp a small handle, as in the case of a poliomyelitis or quadriplegia patient. The cuff is easily slipped over the four fingers and a spoon or other implement can then be inserted between the cuff and the palm of the hand, as shown in illustration.





JOINED FORK AND SPOON

Submitted by: Blanche Talmud, P.T.R.
Institute for Crippled and Disabled
400 First Avenue
New York 16, N. Y.

Source and Cost

Cost of regular iced tea spoon and fork.

Bolt and wing nut purchased at nominal cost at any hardware store.

Description

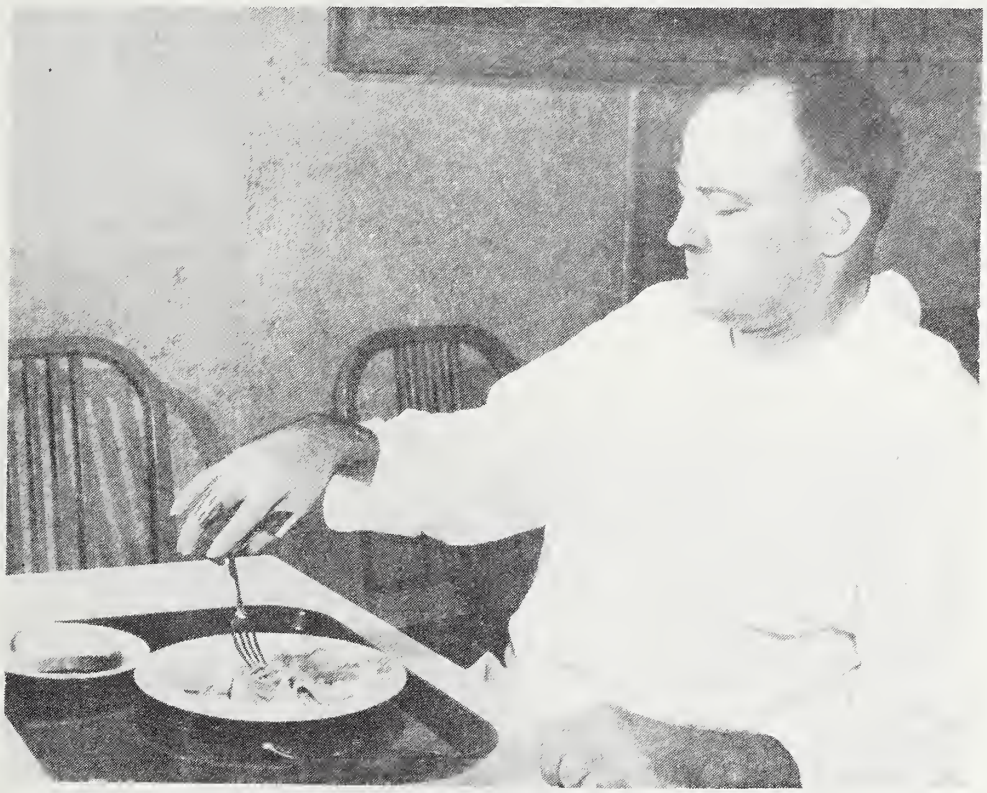
A long-handled spoon, such as an iced tea spoon, and a fork, are joined together by drilling a hole in the ends of the handles and inserting a small bolt and nut.

Purpose and Use

The purpose of this device is to give extra length to a spoon and fork without having to have a special long handle made. They may also be folded together for carrying purposes. This device was set up for patients like the arthritic, or anyone having limitation of joint motion or insufficient muscle power to bring the spoon close enough to the mouth.

EATING DEVICE

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Made as a sample for the Institute.

Description

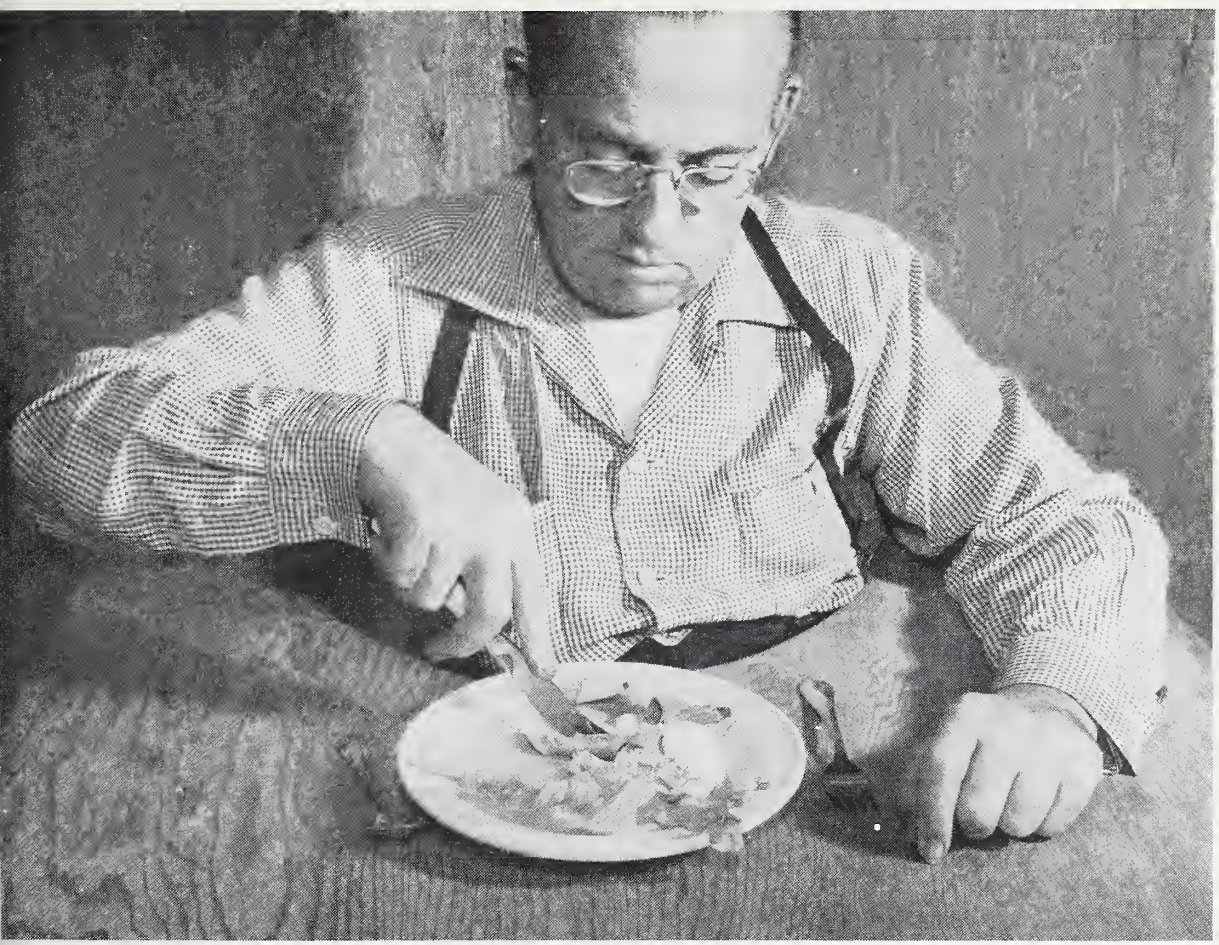
This device consists of a plastic rectangle (4-1/2" by 1-1/8") with slot lock to hold fork or spoon, and an inch-wide strip of steel, fastened to the side away from the palm and so bent and curved to fit around thumb and second finger.

Purpose and Use

It can be fitted to a hand either too weak or too stiff to hold an ordinary fork or spoon. It is especially useful for the quadriplegia or arthritis patient.

KNIFE AND FORK COMBINATION

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Manufacturer
Lamson & Goodnow Mfg. Co.
Shelburne Falls, Mass.

Distributor
Winkley Artificial Limb Co.
90 Fifth Avenue
New York 11, N. Y.

Price: 3.00

Description

This stainless steel eating utensil consists of a curved blade about $4\frac{1}{2}$ inches long terminating in four short prongs. The blade is inserted in a plastic knife-handle.

Purpose and Use

The device is intended for the use of persons who must eat with one hand, such as an upper extremity amputee. For many patients, particularly hemiplegics, the prongs are removed and the implement becomes a one-handed knife. This is done because the prongs are sharp and it is not desirable for all patients to use them for eating and some patients feel more comfortable in using the knife after they have been removed.

GLOVE FOR EATING

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made in the workshop. Cost negligible.

Description

The eating glove is made from a large cotton or work glove, with pockets stitched to the palm surface, as shown in photograph.

Purpose and Use

The glove is used to hold a fork or spoon for eating purposes by patients - such as polio or quadriplegia patients - who lack the power to grasp the handles of ordinary eating implements.

HOLDER UNIT FOR QUADRIPLEGIA

Submitted by: Halloran Veterans Administration Hospital
Staten Island, New York

Source and Cost

Made in workshop.

Description

The holder unit consists of an aluminum piece, 1-1/4 inches x 2 inches x 5/8 inch, on a 24st slot milled out through length 1/2 inch wide, 1/8 inch deep and 1-3/4 inches long. A spring wire 3/32 inch in diameter is bent in a horseshoe to fit the slot. The spring is set into the slot, the ends are set into two 3/32-inch-holes drilled into end of slot. A cover plate is set over the entire piece and secured with four #6, 32 TPI flat head machine screws at the corners. The piece is then ground down for cosmetic effect. This attachment can be applied to any standard or non-standard hand appliance. The four finishing screws may be used to fasten the holder to the appliance.

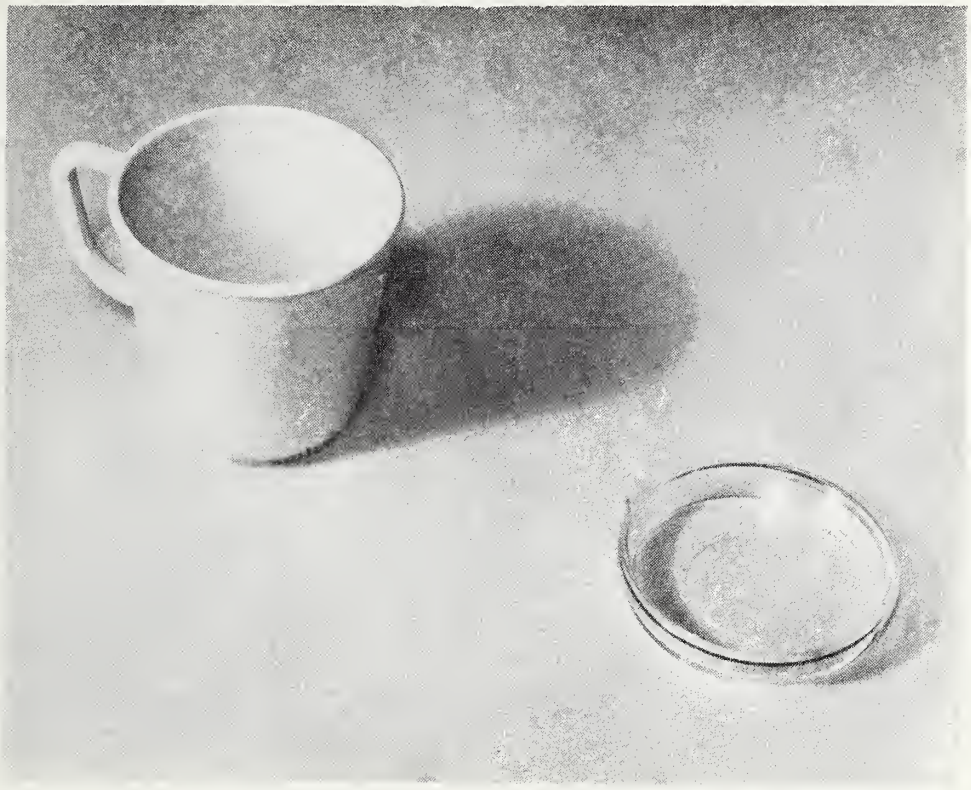
Eating utensils, toothbrush, writing implements, etc. are ground at the ends to fit in the slot.

Purpose and Use

The holder unit was devised to enable the quadriplegia, or any patient with hand weakness, to use fork and spoon, toothbrush, pencil, etc. If disability includes wrist weakness, holder unit should be incorporated in a cock-up splint.

KANT SPILL TRAINING CUP

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Manufacturer:
Baby World Company, Inc.
Long Island City, N. Y.

Distributor:
Almost any neighborhood drugstore

Price: 49 cents

Description

The Kant-Spill Training Cup is a plastic cup with a transparent lock-on lid. The lid is perforated with six small holes along one side and two holes on the opposite side.

Purpose and Use

This cup is recommended when there is difficulty in using an ordinary cup because of involuntary movements. It is adapted to the training of the cerebral palsy patient and also to the quadriplegic or arthritic person. More holes can easily be drilled in the lid to permit the desired flow of liquid.

TELEPHONE HOLDER

Submitted by: J. J. Brown, Director
Vocational Rehabilitation
State of Texas
302 Walton Building
Austin, Texas

Source and Cost

Wooden telephone holder - not manufactured. Can be made for about 1.00.

Description

This device consists of a wooden base (approximately 4" x 6") and an upright arm to which is attached a cradle, or seat, for receiving the mouthpiece (see illustration). It is light-weight and easily pushed out of the way when not in use. A similar device made of metal is on the market.

Purpose and Use

The purpose of the telephone holder is to enable an amputee, polio, hemiplegia or quadriplegia patient, or anyone having the use of only one arm, to use the telephone and have the hand free to make notations, or for other necessary purposes.

TELEPHONE HOLDER FOR ARTHRITIC

Submitted by: C. B. Snodgrass
Pyle Hardware Company
102 North Broadway
Hugo, Oklahoma

Source and Cost

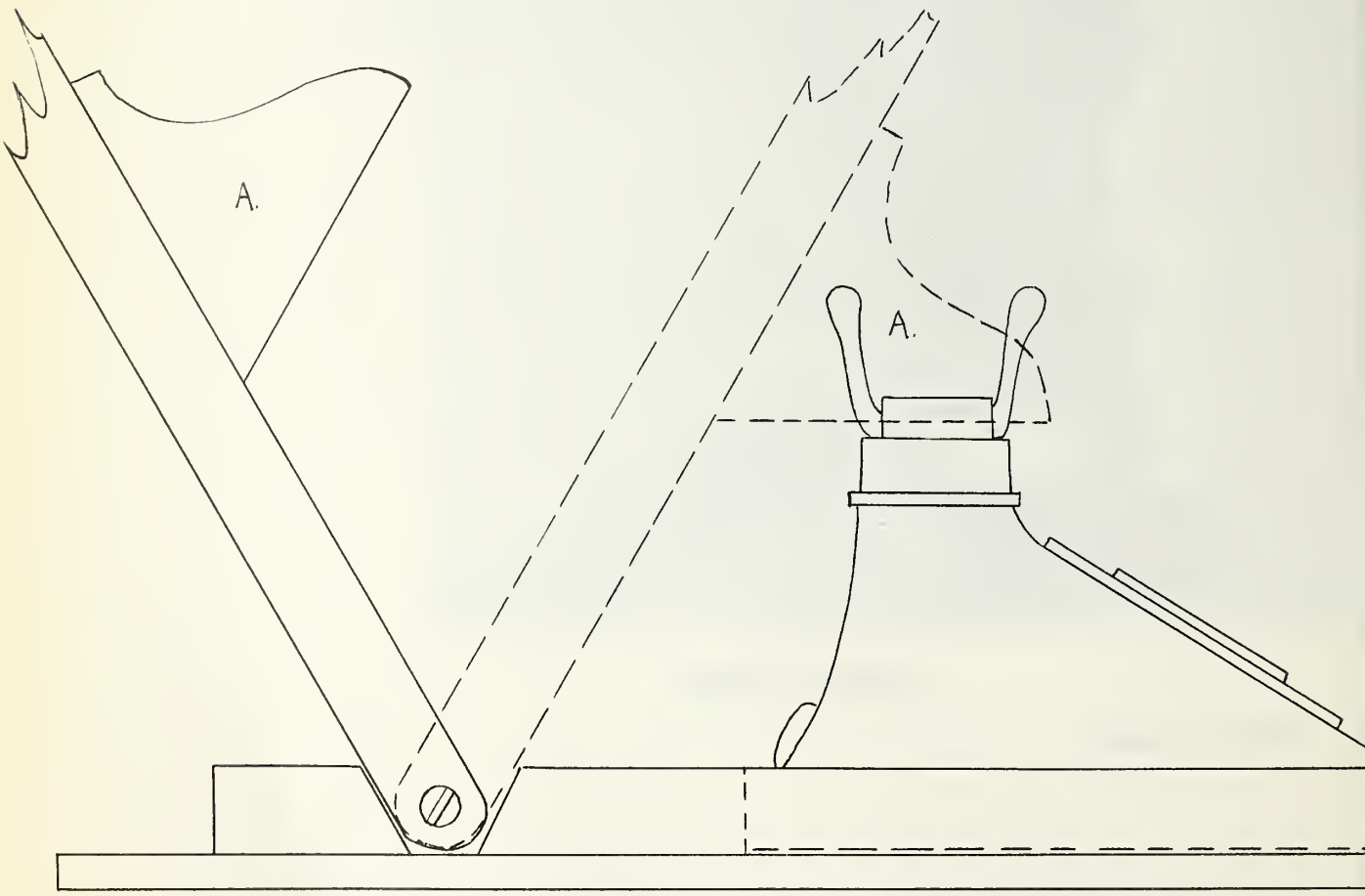
Made at home.

Description

A movable upright arm supports the telephone mouth-piece. A horizontal piece (A) on the back of this arm holds down the switch bar. When the movable arm is pulled forward - or away from the phone - the switch is released; when the arm is pushed back again, the switch is closed. The device is home-made of painted wood and can be attractively decorated to individual taste.

Purpose and Use

This telephone holder was designed for an arthritic with badly crippled hands. It will be convenient for anyone having the use of only one hand, or in case of weakness in both hands.



WRITING AID

Submitted by: Physical Medicine Rehabilitation Service
Veterans Administration Hospital
Richmond, Virginia

Source and Cost

Produced locally.

Description

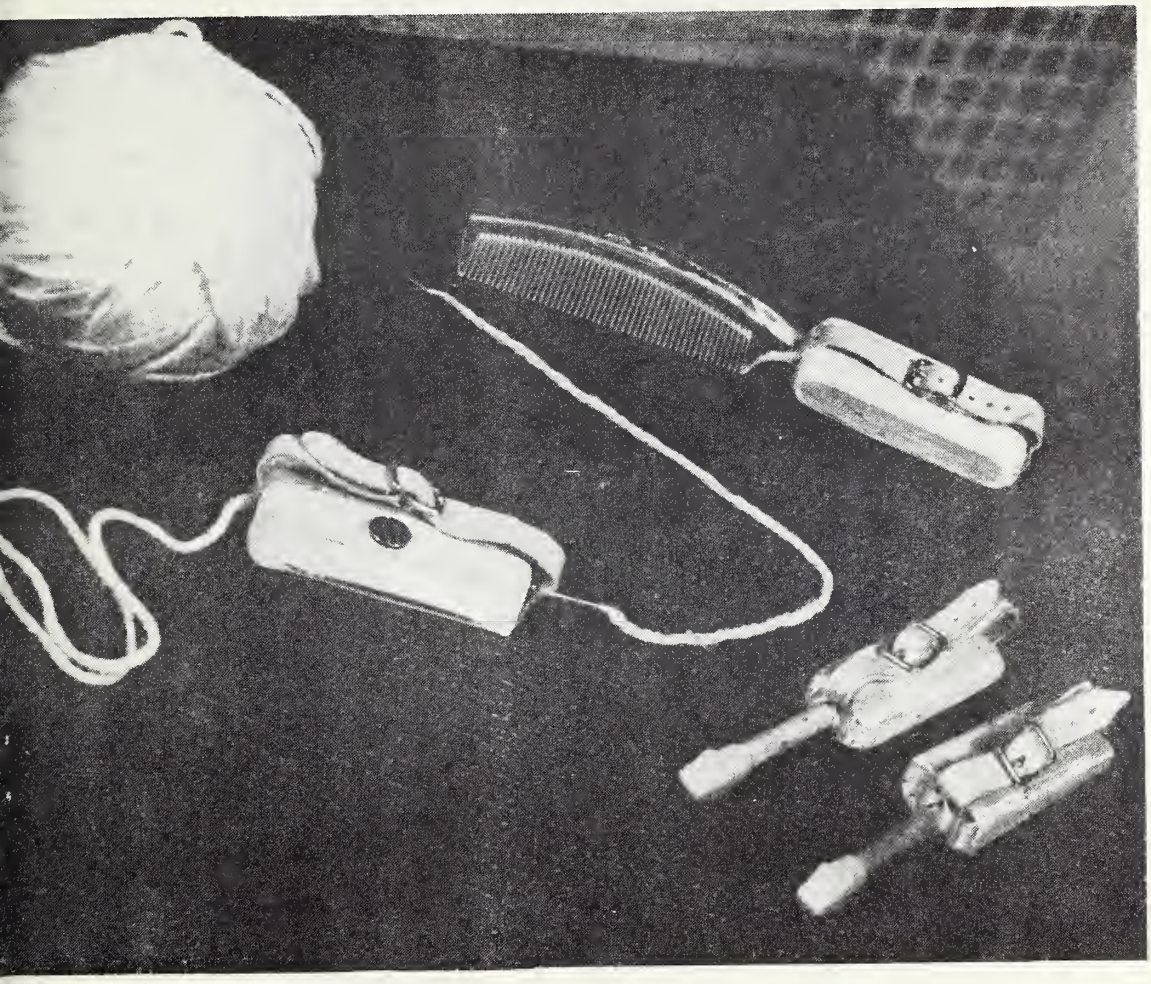
The writing aid consists of a 3/4-inch wide strip of metal, curved to fit over the hand, with a slot to hold the pencil, as shown in the illustration.

Purpose and Use

The device is designed to assist in writing when there is insufficient muscle power to hold pencil in ordinary manner. It is suitable for such patients as the poliomyelitis, quadriplegic, hemiplegic, or arthritic.

WOODEN HANDLE WITH STRAP

Submitted by: Physical Medicine Rehabilitation Service
Veterans Administration Hospital
Richmond, Virginia



Sources and Cost

Produced in the Hospital's wood shop. Cost negligible.

Description

This handle consists of an oblong block of wood, cut to desired size, with metacarpal strap to hold block on palmar surface of the hand. An opening in the end of the handle admits rubber-tipped page turner or typing device, tooth-brush, and many other implements.

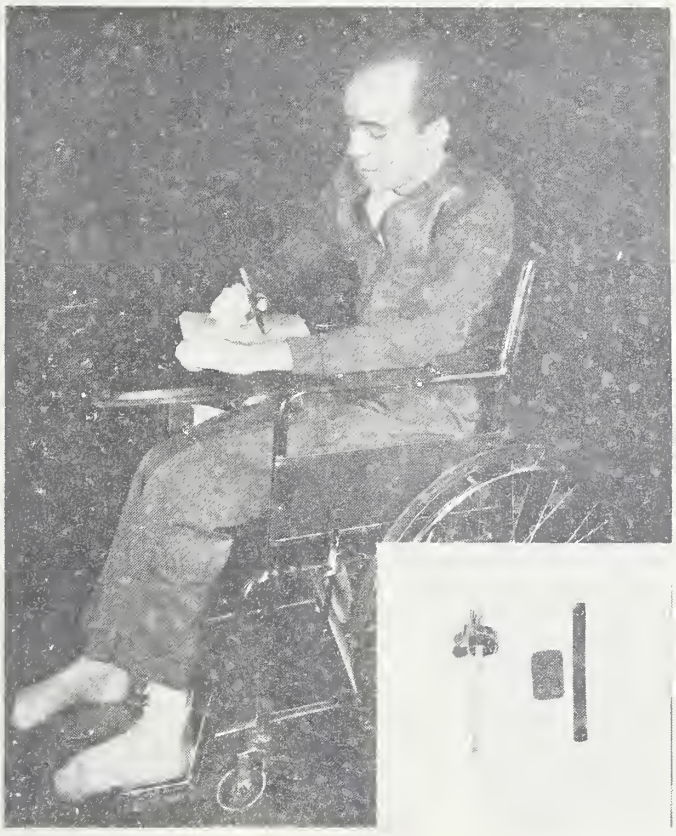
Purpose and Use

The handle enables patients with limited finger flexion range, or patients with paralyzed hands, to hold implements for eating, grooming, typing, page turning, or other hand activities.

LEATHER WRITING DEVICE

Submitted by: Veterans Administration Hospital
Hines, Illinois
Louis B. Newman, M.E., M.D., Chief
Physical Medicine Rehabilitation Service

Developed in the Occupational Therapy Section of the Physical Medicine Rehabilitation Service in collaboration with the Prosthetic Appliances Unit.



Sources and Cost

Made in the Prosthetic Appliances Unit, Veterans Administration Hospital, Hines, Illinois.

Description

This holder for pencil or pen is formed of two pieces of leather, one approximately $1\frac{1}{2}$ x $2\frac{1}{4}$ inches, the other approximately $6\frac{1}{4}$ x 5/8 inches, depending on size requirements. The shorter length is slit to admit the long strap (see working drawing) and the ends are fastened by snaps.

Purpose and Use

This device is intended to allow persons to write with a hand having insufficient power to grasp pen or pencil. It will be a help to many patients with paralysis due to poliomyelitis, cervical cord injury, or other neurological conditions involving the fingers. Placed over thumb and index fingers, the device maintains the writing implement in proper position. It is small enough to be carried in the pocket.

REMOTE CONTROL KEYBOARD FOR ELECTRIC TYPEWRITER

Submitted by: Occupational Therapy Department
Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

International Business Machines Corporation
590 Madison Avenue
New York 22, N. Y.

This device is not available. A few models were made as an experiment and the instrument shown is one of these.

Description

This light keyboard is used as a selector for the electric typewriter, to which it is connected by a rubber-covered wire. The typewriter, which does the actual typing, can remain on the desk or table while the keyboard is placed on a bed table, wheel chair tray, lapboard, or wherever it can be used most conveniently.

Purpose and Use

The remote control key board permits the use of the electric typewriter by persons who would be unable to approach the typewriter itself, either by reason of weakness or because of the position to which they are confined.

PAGE TURNER

Submitted by: Crippled Children and Adults of Rhode Island
24 Meeting Street
Providence, Rhode Island

Courtesy of Providence Sunday Journal
Gravure Section, Date 2-13-49
Number 6, page 5

Source and Cost

This page turner is made at home from scrap material.

Description

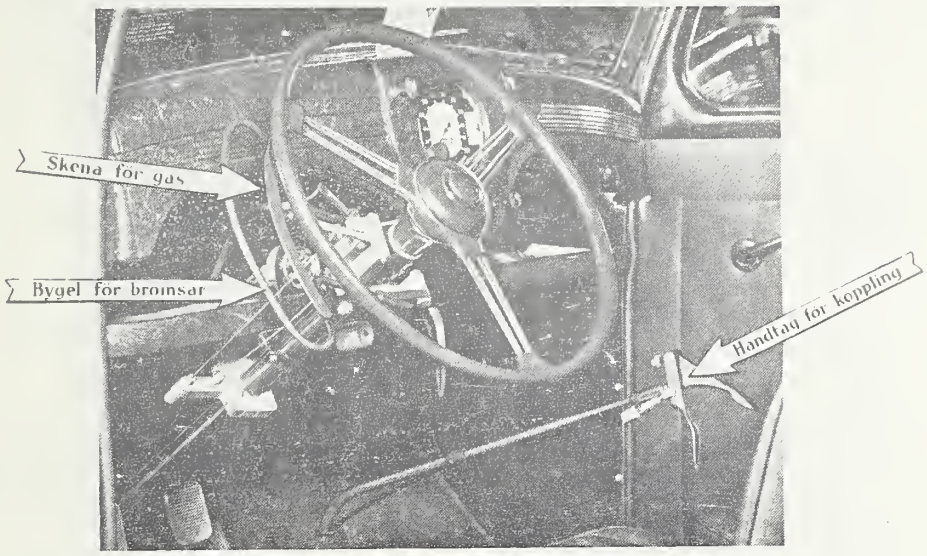
The construction of the page turner utilizes spools, scraps of wood, and paper clips. The book is prepared by attaching a paper clip to each page and a continuous thread to each clip and winding the thread around the spool at the side of the turner. Patient can turn or "swat at" a rod that is fastened to the small drum (or spool) which will continually wind up the thread and so turn the pages.

Purpose and Use

The purpose of the page turner is to make it possible for the athetoid to turn the pages of his book unassisted.

AUTOMOBILE DRIVING ARRANGEMENT FOR PERSONS WITH LIMITED USE OF LOWER EXTREMITIES

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden



Source and Cost

Manufacturer
Norrbackainstitutets Finmekaniska Verkstad
Norrbacka, Stockholm, Sweden
"Invalidbil"

Type A	Price	1,025 crowns
Type B	Price	700 crowns
Type C	Price	700 crowns
Type D	Price	235 crowns

All prices quoted are in addition to initial price of the two automobiles, the Anglia and the Prefect.

Description

In this "automobile for invalids" foot pedals have been replaced by hand regulators. As the operation of brakes and shifting of gears require some muscular strength, the equipment has been supplemented by a "vacuum - serve - system", that is, the movements are made by hand, but the additional power required is obtained from the vacuum derived from the motor.

At the left of the steering rod and below the steering wheel is a curved loop and a curved rail. The brakes are applied by lifting the loop, and the gas is increased by lifting the rail, which is done by the fingers of the left hand. A handgrip is attached to the shifting rod in a similar fashion to that used for the brake and shifting grip on a motorcycle. This constitutes the shifting of the gears. When the headlight control is moved from its place on the floor to the dashboard, all foot movements have been changed to hand movements.

Four different types of construction

Type A Entire operation by hand for persons who have lost both legs.

Type B For persons without right leg. Brakes are controlled by hand and gas is regulated by hand. Shifting done in ordinary manner.

Type C For persons without left leg. Shifting of gears and gas regulation done by hand. Driver uses foot brake and foot exhilarator, but needs an additional hand regulator for the gas on slippery roads.

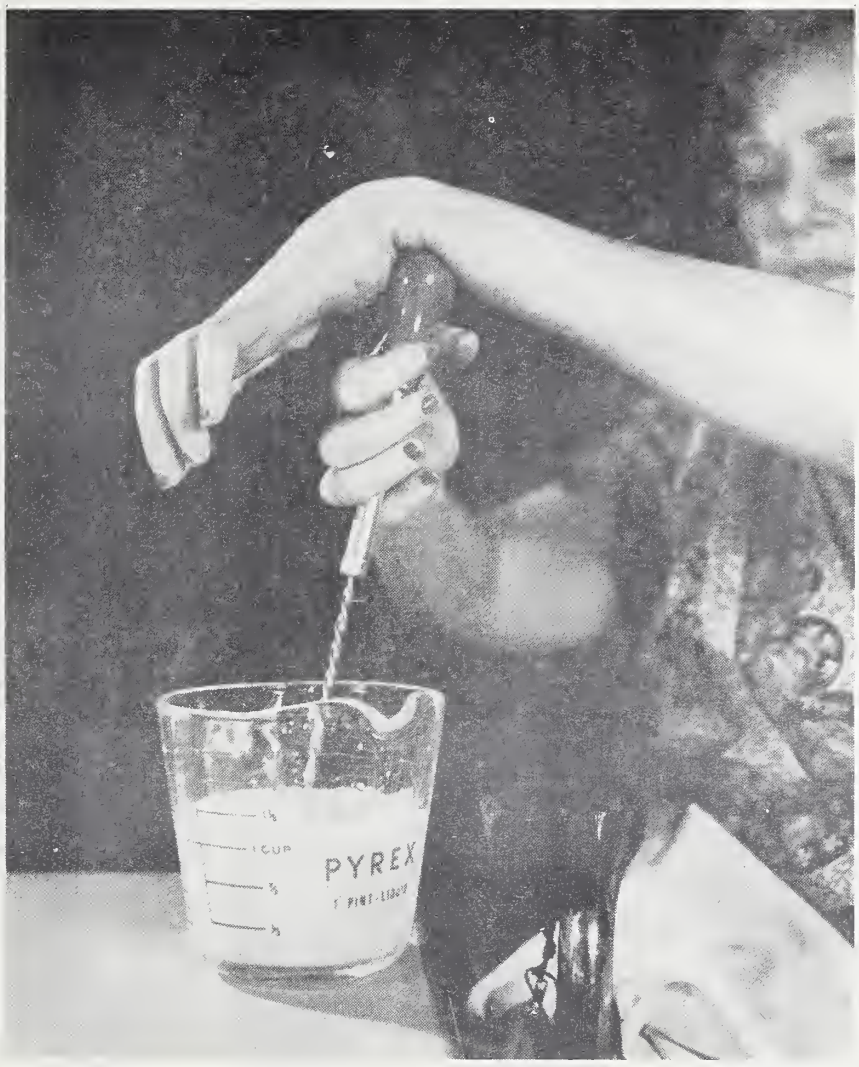
Type D When the right leg is partly useful, the gas is regulated by a special handgrip under the steering wheel.

Purpose and Use

The arrangement of the "automobile for invalids" makes driving possible for amputees, paraplegics, and others with limited use of the lower extremities. A great advantage to this type of car is that it can be used also in the usual manner, without the special appliances.

KITCHEN UTENSILS FOR THE ONE-HANDED

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street, New York 16, N. Y.



Sources and Cost

These utensils are sold in almost all hardware departments and at present in the following:

a) Macy's, Lewis & Conger
b) Lewis & Conger
c) Lewis & Conger
d) Bloomingdale, Miles Kimball
e) Macy's
f) Bloomingdale, Lewis & Conger

Description

a) The eggbeater is operated by an up-and-down motion of one hand.

b) This pot lid has a handle into which fingers can be slipped to lift the lid, - even weak fingers or fingers stiffened and deformed by arthritis and unable to grasp the usual knob.

c) With this long-handled dipper, serving is accomplished by many who could neither lift the pot nor manage the ordinary ladle.

d) This rolling pin, consisting of many small rollers held together in a ring, with attached handle over the top, can be used effectively entirely by one hand.

e) This slicer and grater for eggs, cheese or vegetables requires only one hand for successful use, since when base is pressed against a bar, as shown, no other hold is needed. It can be used also to peel fruit.

f) The double suction cup holds the mixing bowl steady at any angle desired, so that only a hand to hold fork or one-hand beater is necessary. (Bowl pictured is small size, not the large mixer.)

Purpose and Use

All of these utensils are usable by persons having only one hand, or whose hands are crippled.

RETRACTABLE KEY CHAIN

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Distributors:
Miles Kimball Co.
Oshkosh, Wisconsin

Price: $1.39

Robert W. Kellogg Co.
Springfield 2, Mass.

Lewis & Conger
45th Street and Sixth Avenue
New York, N. Y.

Most department stores

Description

This is a small reel with an automatic retractable fine chain. It is fastened to lapel or handbag by means of a safety clasp on the back of reel.

Purpose and Use

Key or pencil may be attached to the chain. Its purpose is to make them always available and to lend assistance to weak or unsteady hands, as in the case of polio, quadriplegia, or palsy patients.

PAUL PICK-UP STICK

Submitted by: Physical Medicine and Rehabilitation Service
Bellevue Hospital
New York 16, N. Y.

Source and Cost

Paulo Products, Inc.
5711 West Park Avenue
St. Louis 10, Missouri

Price: $4.95

Description

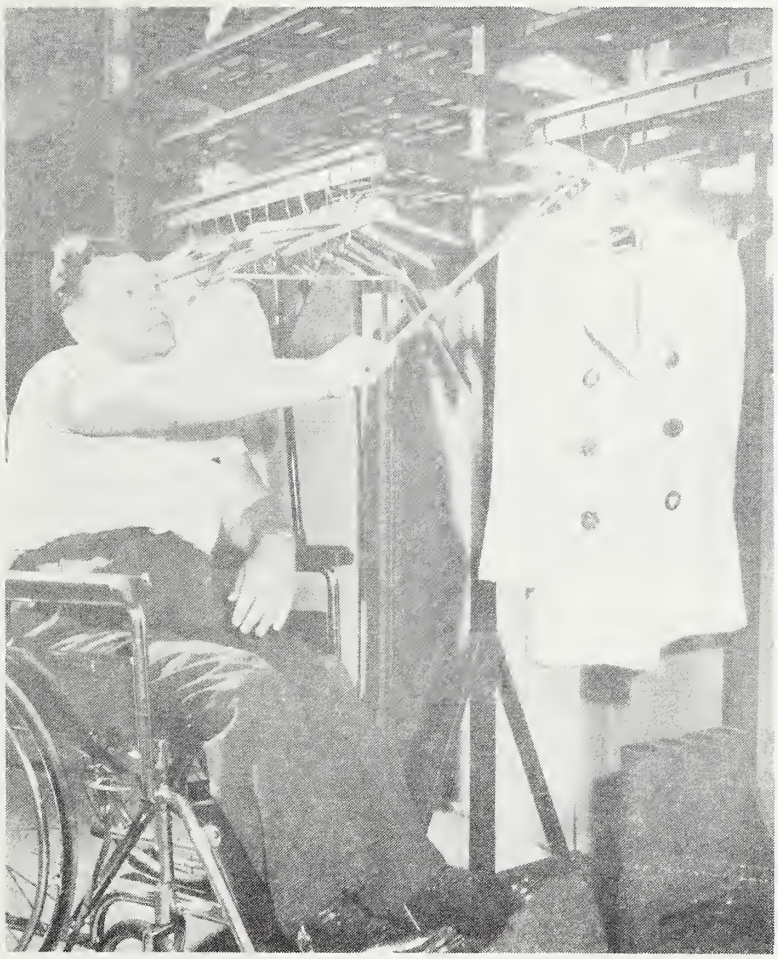
This is a 2½-inch light-weight rod with a wire loop and point on one end and a magnet on the other.

Purpose and Use

This device enables patients confined to bed or wheel-chair, or patients who cannot stoop or reach - such as arthritics - to pick up objects at a distance.

REACHING TONGS

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Made in the workshop at a cost of approximately 50 cents.

Wooden tongs - Distributor:
Robert W. Kellogg Co.
Springfield, Mass. Price: $2.00

Description

These tongs - fashioned after a pair pictured in the March 1950 issue of POPULAR MECHANICS - are made of light-weight Duralumin and weigh less than 10 ounces. The metal is bent and the two parts are riveted in the center. (A washer can be inserted between them for smooth operation.) In this way a positive gripping action is attained, causing the arms to grasp firmly when the handles are held closed. Note that the arms of the tongs are curved slightly and that a piece of rubber tubing is pressed over the ends. There is also on the market a similar device in wood.

Purpose and Use

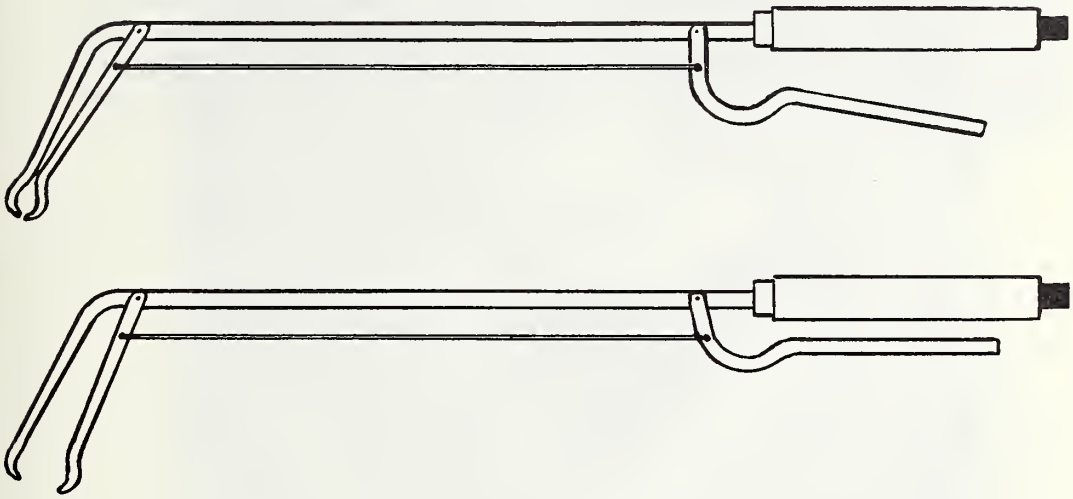
The tongs enable persons with limited joint motion, or persons confined to a wheel chair, to grasp and pick up objects otherwise out of their reach. They are especially useful in lifting cans from cupboard shelves or clothing from closets. The tongs will assist patients with poliomyelitis, paraplegia, incomplete quadriplegia, arthritis, multiple sclerosis, or any condition requiring wheel chair living.

SWEDISH PINCHER

"GRIPTANG"

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden

4 dm.



Source and Cost

Manufacturer and distributor
Harry Mansson
Yegnebyvagen 45
Angby, Sweden

Price: 20 crowns (about 4.00)

Description

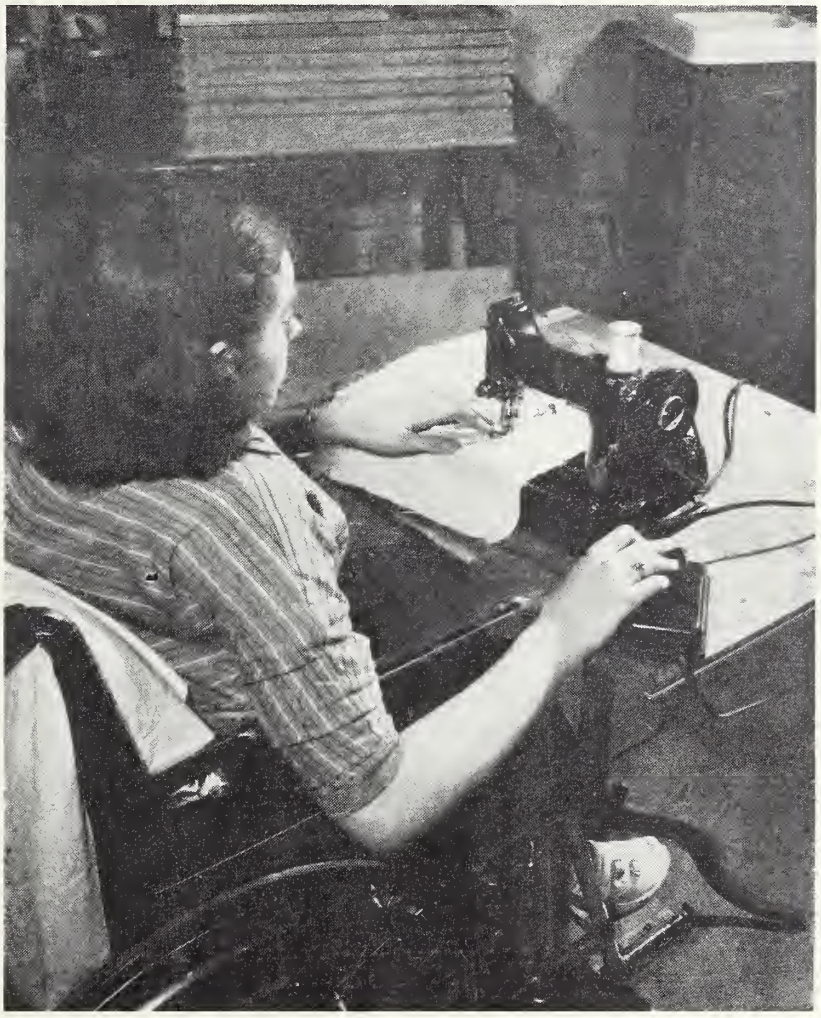
This pincher is made of light metal tubing, with grip of wood stained yellow. The length is about 4 decimeters (or nearly 16 inches) and the weight is .1 kilogram (or about $2\frac{1}{2}$ ounces), but the pincher can be made in different lengths and different grip sizes. The jaws open when the handgrip is pressed. When the handgrip is released, spring pressure closes the jaws. There is a magnet set into the handle.

Purpose and Use

A device of this kind can be important to persons confined to a wheel chair, or to those unable to stoop or reach. By using either the jaws or the magnet, the patient is able to pick up numerous objects from the floor and to lift articles from high shelves or hooks. It may be useful to poliomyelitis patients, arthritics, and paraplegics, and in heart or other cases where exertion should be avoided.

PORTABLE ELECTRIC SEWING MACHINE

Submitted by: Occupational Therapy Department
Institute of Physical Medicine and Rehabilitation
New York 16, N. Y.



Source and Cost

Singer Sewing Machine Company
149 Broadway
New York 6, N. Y.
(or local offices)

Long bobbin machine	89.50
Round bobbin machine	114.50

Description

The sewing machine is a standard Singer portable electric sewing machine with separate push button control unit which can be placed in any position as desired.

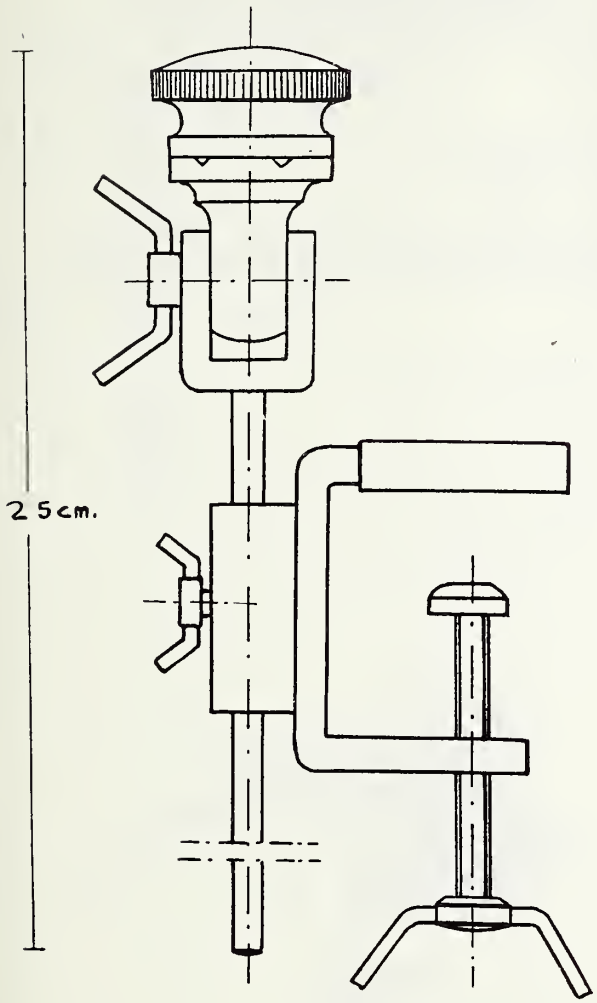
Purpose and Use

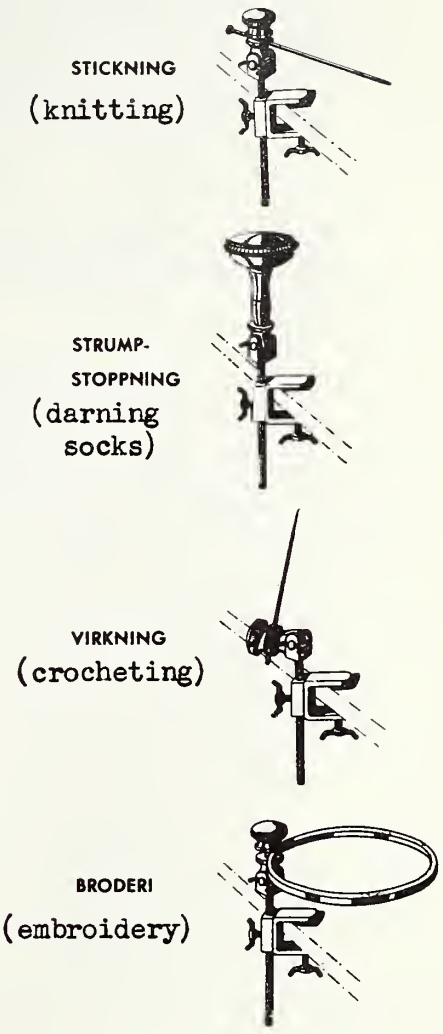
This portable sewing machine has been found to be usable by paraplegics, and others with disabilities involving loss of use of the lower extremities, since the control unit can be operated by hand as shown in illustration.

One purpose this portable machine can serve is to offer another field in which vocational possibilities can be explored for persons with above-mentioned type of disability.

HOLDER FOR KNITTING AND CROCHETING NEEDLES

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden





Source and Cost

Manufacturer
Norrbackainstitutets Finmekaniska Verkstad
Norrbacka, Stockholm, Sweden

Price with darning egg and sewing frame 33 crowns ($6.60)

Description

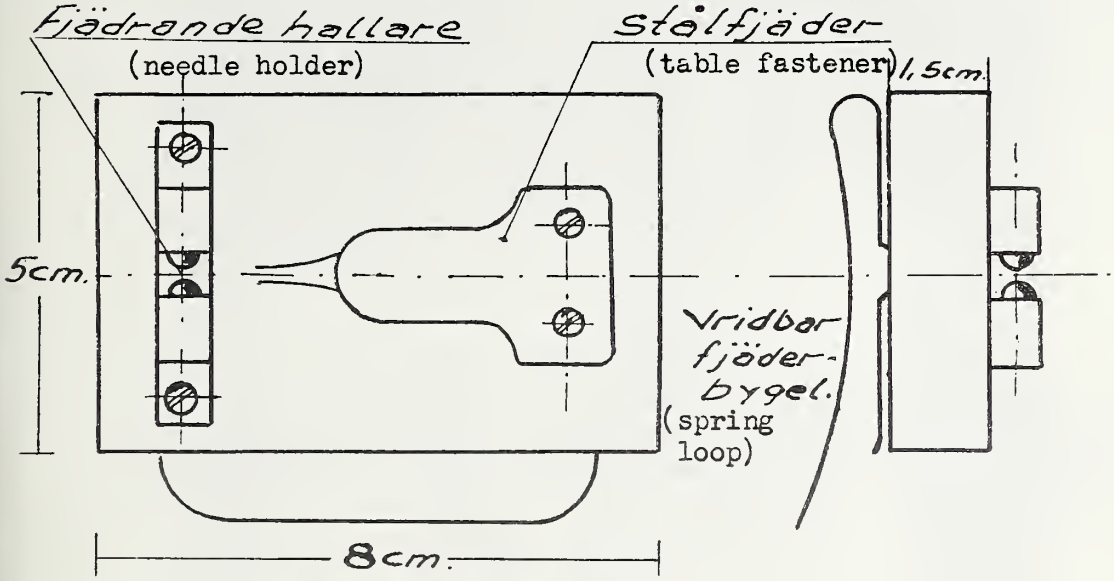
The holder is made of shiny nickel-plated brass. The clamp screw is of steel and lacquered. All surfaces of the clamp are covered by rubber to protect the top of table or elsewhere that device is used. The holder can be used for crocheting and knitting needles of all prevailing sizes. Special equipment is available for holding an embroidery frame and a special piece for holding darning egg. The holder can be raised and lowered, turned and placed in all positions.

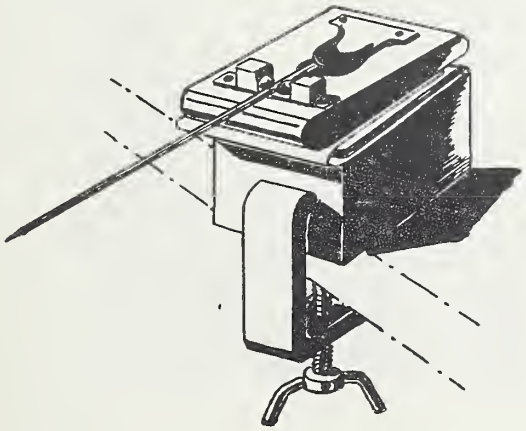
Purpose and Use

This device makes it possible for persons with the use of only one hand to knit, crochet, embroider, and to darn socks.

DEVICE FOR ONE-HANDED KNITTING AND CROCHETING

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden





Source and Cost

Manufacturer
Norrbackainstitutets Finmekaniska Verkstad
Norrbacka, Stockholm, Sweden

Price without fastener for top of table	7.50 crowns	(about $1.50)
Price with fastener for top of table	12 crowns	(about 2.40)

Description

The device consists of a spring holder, a steel spring, and a turnable spring loop. The fastening equipment for the holder is constructed of shiny nickel-plated brass and steel plate. The base is made of beechwood. The fastening equipment for the top of table is made of beechwood and the clamp screw of lacquered steel. (See lower picture.)

The holder is used as a fastener for knitting and crocheting needles with a shaft from 2.5 to 5 mm. The holder can be attached to the belt or to the waistband of the skirt, and because of its small size, it can easily be kept in a handbag or knitting bag. The turnable spring loop permits the holder to be used by either right or left hand. When the holder is not attached to the belt, the fastener for top of table can be used.

Purpose and Use

This device makes knitting and crocheting possible for persons having full use of only one hand. It is intended primarily for amputees, but may also be used by hemiplegics or others with limited function of one hand.

CARRYALL

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street, New York 16, N. Y.

Source and Cost

Made and sold by:
Crutch Carryall Company
340 West 41st Street
Jacksonville 8, Florida

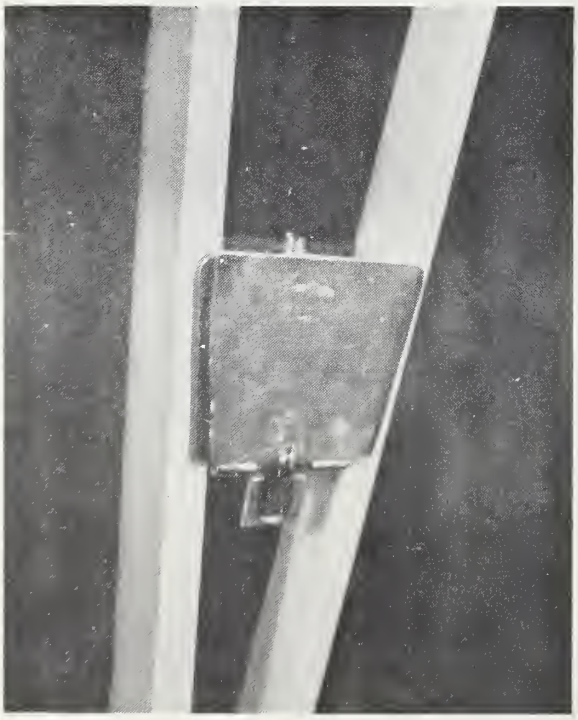
Price: 6.75

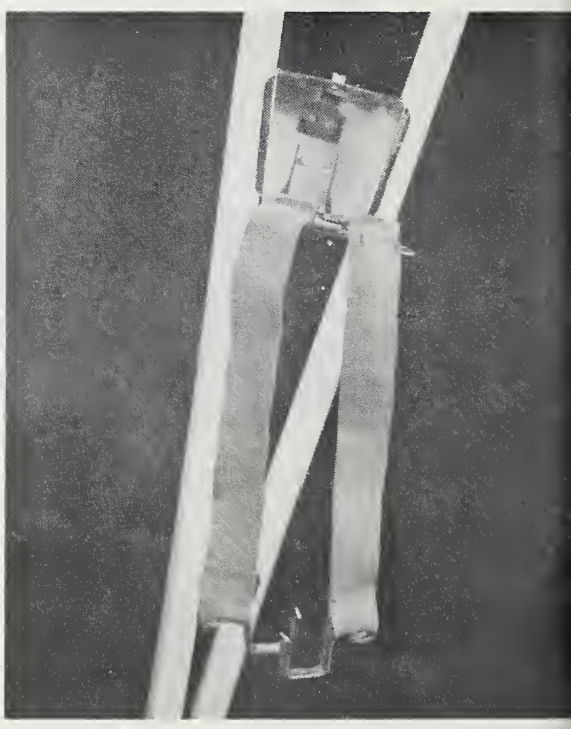
Description

This device consists of a flat metal box so shaped that it can be fitted between the shafts of an ordinary wooden crutch. One of the broad sides of the box opens to release two straps of heavy elastic rubber. The open side of the box serves as a base for package or other article to be carried, while the straps hold it in place. The straps are furnished with end hooks which grasp the shafts of the crutch when the straps are placed over the package.

Purpose and Use

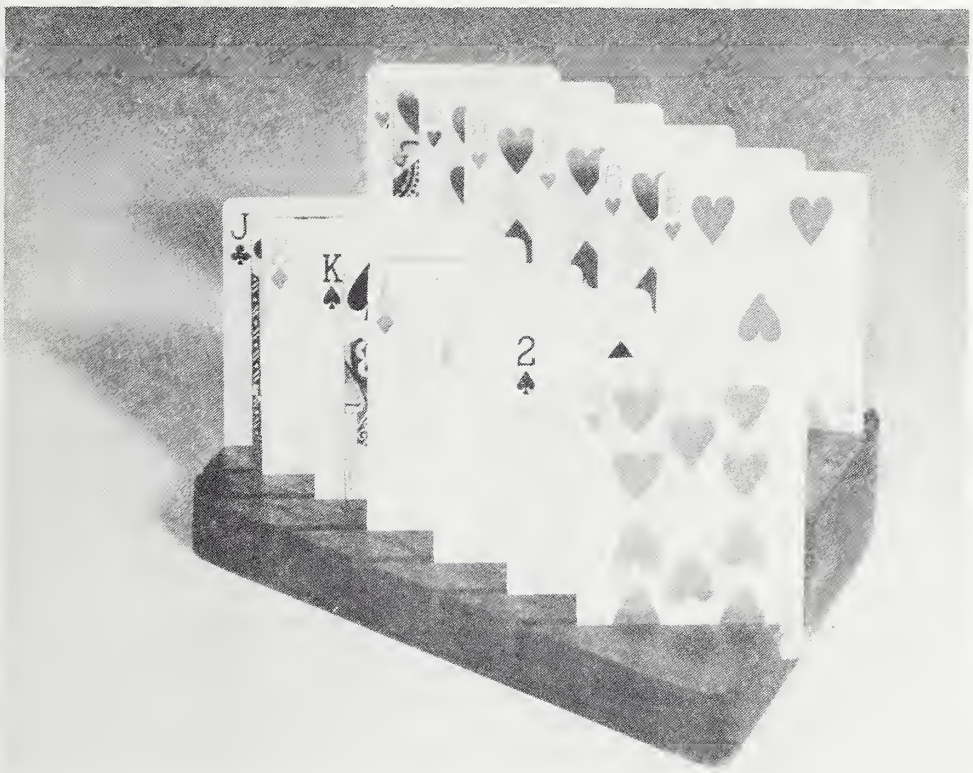
The Carryall provides a safe means whereby a person walking with crutches can carry a package, a book, a folded coat, or other bulky article and still have both hands entirely free to grasp the crutches. It is suitable for anyone who uses crutches provided his arms are strong and his balance reasonably good. It has been tried successfully by a few paraplegics.





PLAYING CARD HOLDING RACK

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Made and sold by:
Adjustics, Inc.
428 East 67th Street
New York 21, N. Y.

Price: 1.25 F.O.B.

Description

There is now available a playing card holder made of polished walnut wood. It is grooved so as to provide 13 slots for inserting the cards.

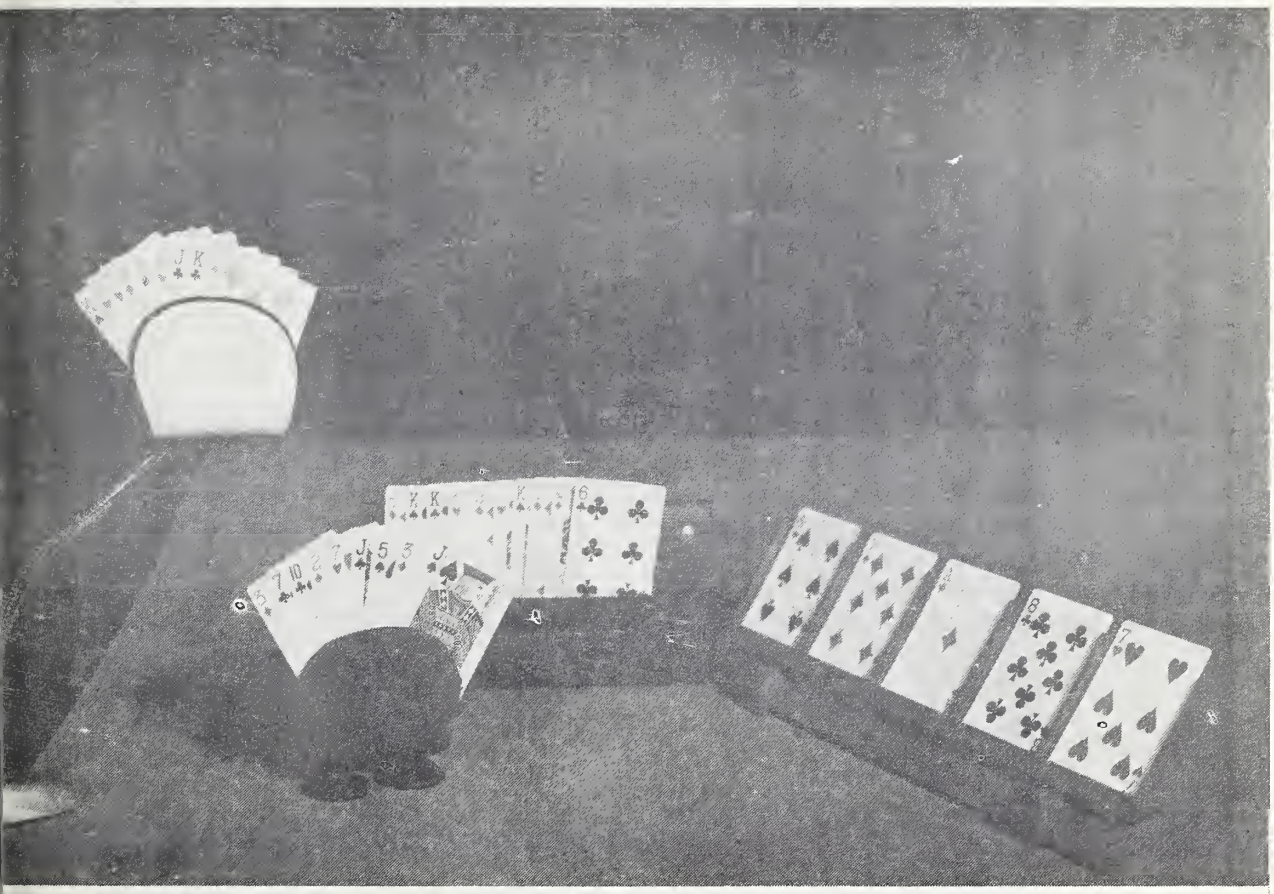
We suggest, as a substitute, a handy little aluminum rack which may be purchased in 5 and 10 cent stores. Its original purpose was to serve as a spice rack for the kitchen or a handy rack for the garage.

Purpose and Use

The purpose of this device is to enable the one-handed, or those who have hand weakness, to participate in card games, by providing a means of holding the cards in an upright position, so that they are easily seen and are accessible for use.

CARD HOLDERS

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street, New York 16, N. Y.



Sources and Cost

a) The suction cup cardholder

Franklin O. Church,	With rubber suction cups	5.00
48 Norwood Ave., Buffalo, N.Y.	With clamp and goose neck	6.50

b) The folding leather cardholder

Hammacher, Schlemmer & Co., Inc.		
145 East 57th St., New York 22, N.Y.		5.95

c) The Handi Card Rack

Deming Products	Approximately -	retail	1.98
42 West 76th St., New York 23, N.Y.		wholesale	1.25

Description

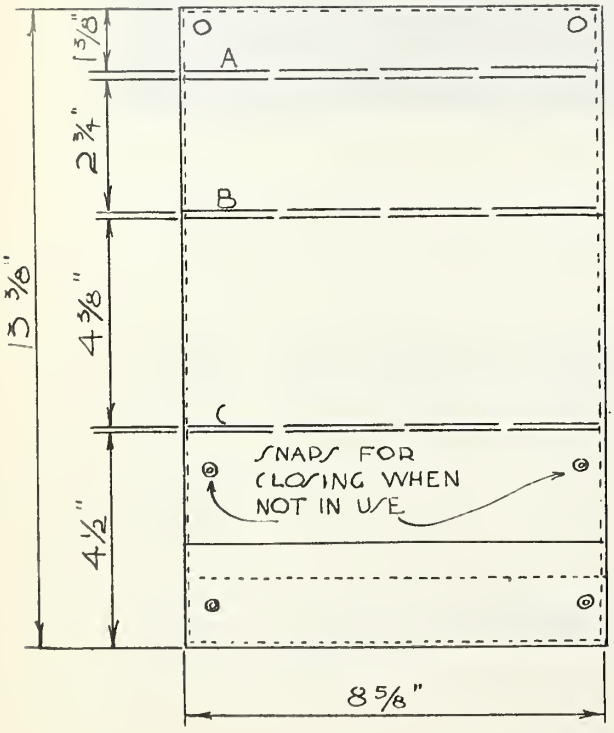
a) The suction cup cardholder consists of a rounded waist-shaped piece of metal, upholstered in felt and backed with leather, then folded to grip a hand of cards and hold it fanwise. Two rubber suction cups make a firm base to prevent the device from being easily upset. Another model is furnished with a goose neck and a clamp to attach it to bed or wheel chair.

b) The folding leather cardholder is made of a piece of leather (12-3/8" x 8-3/8") lined with silk and interlined with cardboard so separated as to permit bending the whole into the form of a triangular cylinder. Two snap fasteners hold this in shape. An additional strip of leather on the front and the turn-up at the bottom make two long, shallow pockets in which the cards are arranged. This device can be folded flat (approximately $8\frac{1}{2}$" x $4\frac{1}{2}$") and fastened by a snap at either end.

c) The Handi Card Rack is a flat piece of wood, divided by wooden strips into five spaces, each of playing card width. The whole is held at a convenient angle by two wedge-shaped pieces of wood which form the base. The rack is brightly painted in red or yellow.

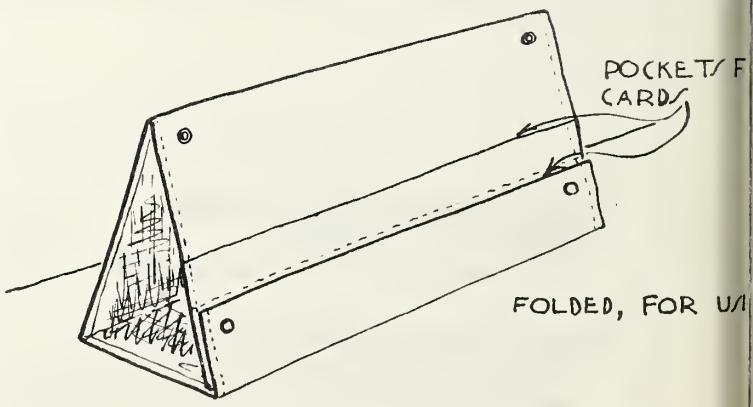
Purpose and Use

The card holders are intended to make card playing possible for persons who cannot conveniently hold their cards in the usual manner. They will be useful to any who have only one hand, or whose hands are weak, stiff, or imperfectly controlled, as in cases of quadriplegia, arthritis, or cerebral palsy. The type of holder to be selected is a matter of individual preference, but the suction cup model with goose neck has been used successfully by some patients who could not use any of the others because of their inability to sit up at a card table in the usual manner. Also, experience seems to indicate that for cerebral palsy patients, and others similarly affected, the best type of card holder is the slotted wooden holding rack shown in our first booklet.



FLAT PLAN, LEATHER-SIDE UP

DOUBLE BROKEN LINES (A, B & C) INDICATE WHERE CARDBOARD INNER-LINING IS CUT (ALLOW 1/8" BETWEEN EDGES)

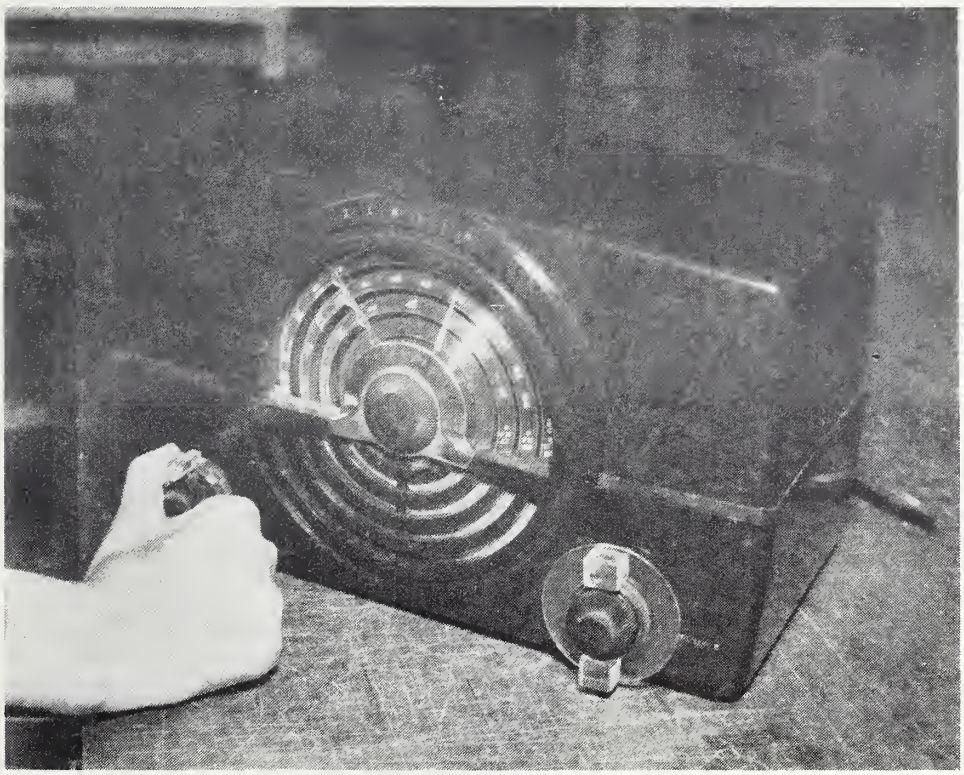


DRAWN BY: C. HUNT

RADIO CONTROL DEVICE

Submitted by: Veterans Administration Hospital
Hines, Illinois
Kelso A. Carroll, M.D., Manager
Louis B. Newman, M.E., M.D., Chief

Developed in the Occupational Therapy Section of the Physical Medicine Rehabilitation Service in collaboration with the Prosthetic Appliances Unit.



Sources and Cost

Made in
The Prosthetic Appliances Unit
Veterans Administration Hospital
Hines, Illinois

Description

A plastic disc, with center hole of the same diameter as the control knob, is slipped over the control knobs of the radio. Attached to the disc are two plastic cubes. (See illustration.)

Purpose and Use

The cubes make possible manipulation of the controls of a radio receiving set, or other similar instrument, by hands too weak or too stiff to grasp the knobs. Patients whose hands have been affected by poliomyelitis, paralysis due to cervical cord injury, or other neuromuscular dysfunction, find this device helpful, as do those with hands stiffened by arthritis. In many cases, persons who otherwise could not operate the radio without assistance are able to enjoy it independently.

PIANO PEDAL AID FOR PARAPLEGIA

Submitted by: Ernest M. Fuchs
Occupational Therapy Student
New York University

Source and Cost

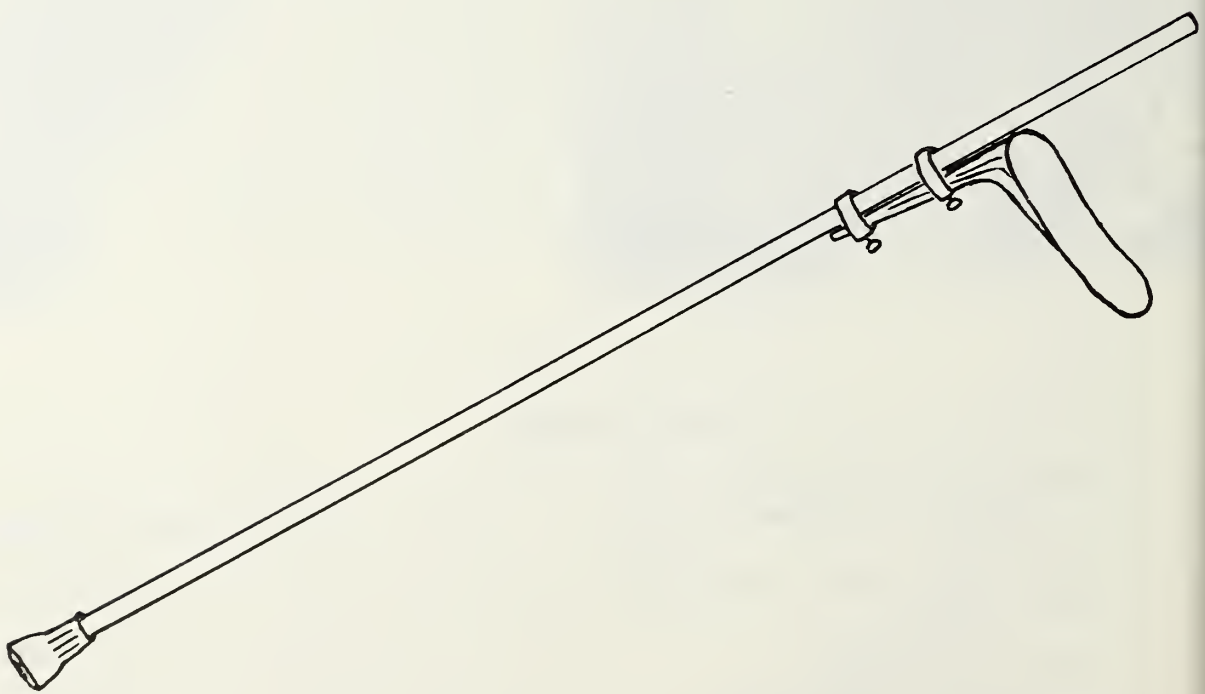
		Price:
Turnbuckle for arm-rest	Variety or hardware store	about 20 cents
Metal angle	Variety store (5 and 10)	35 cents
Small clamps	Variety store	45 cents
Rubber suction tips	Surgical supply store	40 cents
Broomstick	Hardware store	
Rubber arm-rest cushion	Surgical supply store	

Description

The pedal aid may be devised by several methods. A standard Loftstrand crutch can be used, as shown in illustration, or a standard wooden crutch will serve if another hand-piece (rest) is inserted, above the regular one, at a comfortable height to fit under the armpit. If an extra hand-piece is not available, a turnbuckle, suitably padded, may be substituted. The whole device can be made from a broomstick, with suction-cup crutch tips and an arm-rest made from a metal angle attached by small clamps or permanently attached by screws (see drawing), and padded with a rubber arm-rest cushion.

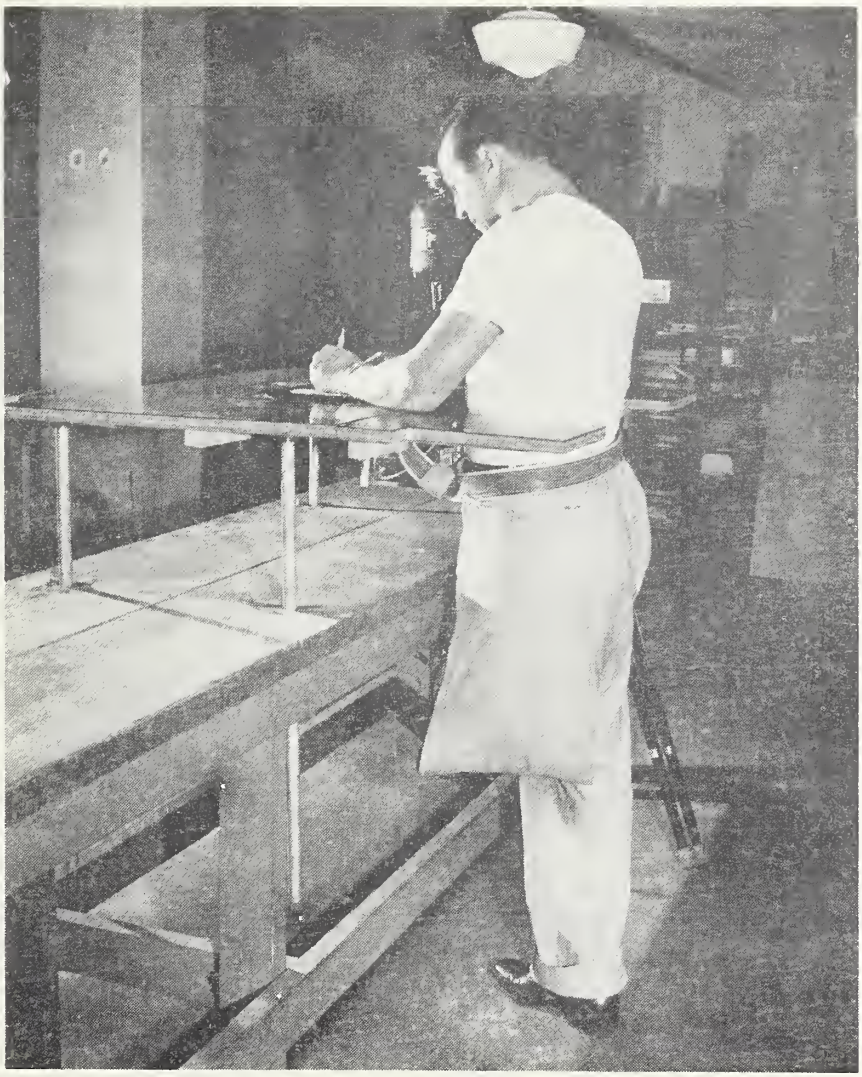
Purpose and Use

The purpose of this device is to allow a person with paralysis of the lower extremities to use the pedal when playing the piano. Various ways of making the device have been described so that a patient's own crutches can be used. For a patient who does not use crutches, the broomstick model is easily constructed.



WORK TABLE WITH SUPPORT FOR STANDING

Submitted by: Occupational Therapy Department
Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

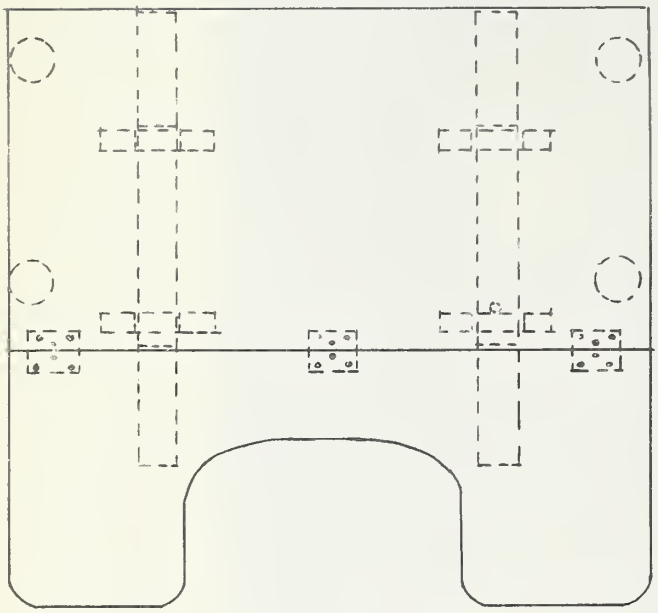
Made in workshop. Cost approximately 3.00

Description

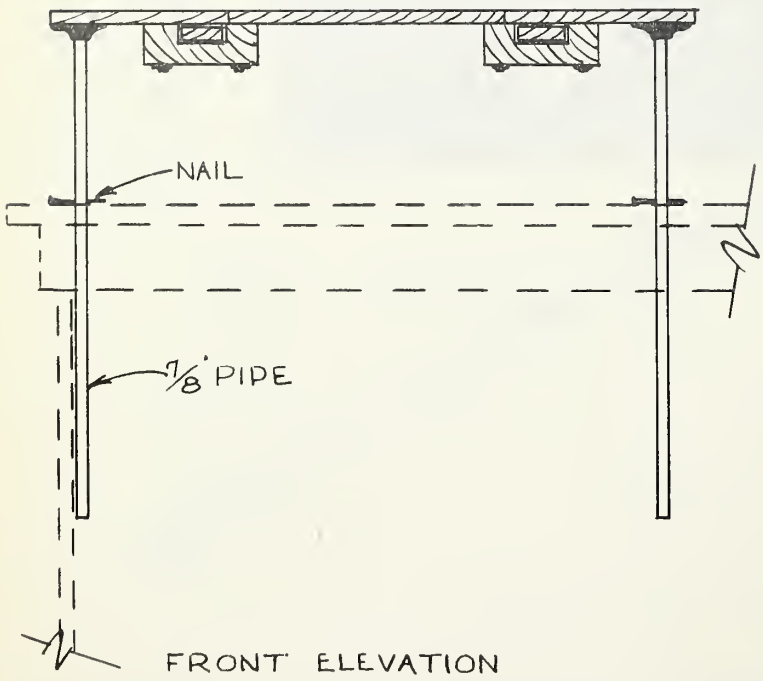
This adjustable standing table consists of a flat top of wood with wide, hinged arm-rests and a safety belt to prevent the worker from falling. Four adjustable metal pipes serve as legs, which are run through the ordinary wooden work bench. (See working diagram.

Purpose and Use

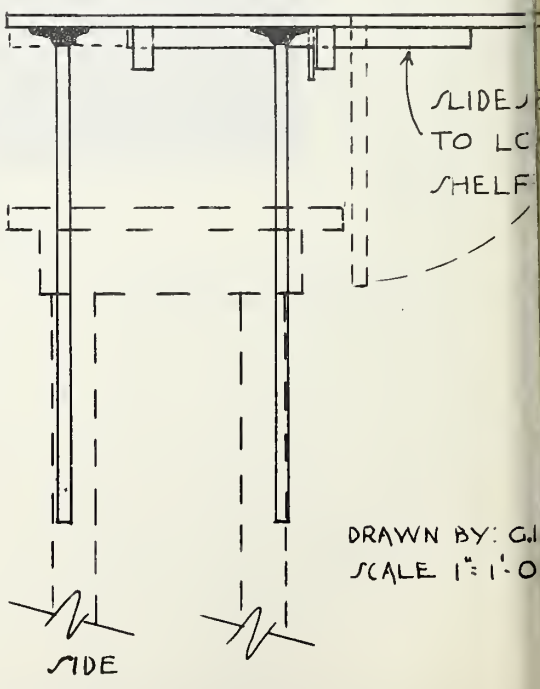
This work table is used primarily for lower extremity unilateral amputees before prosthesis fitting, and for paraplegics, to improve their balance.



PLAN



FRONT ELEVATION



SIDE

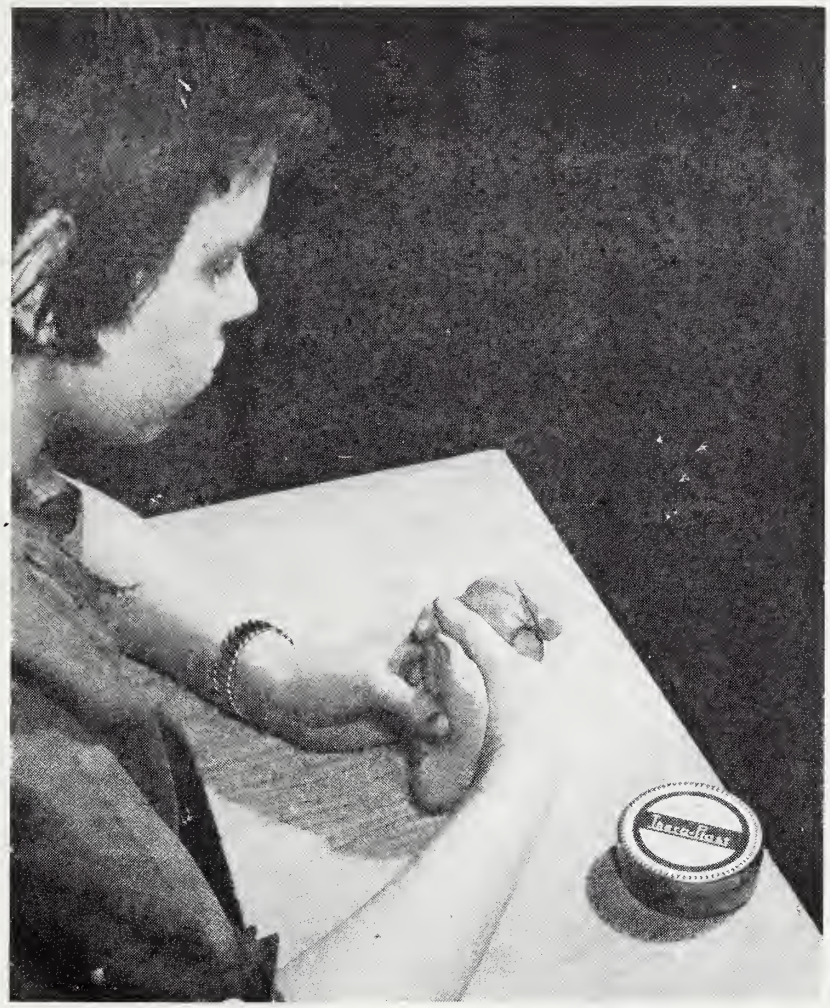
DRAWN BY: G.
SCALE 1" = 1'-0

SECTION II.

DEVICES FOR THERAPEUTIC EXERCISES

THERA-PLAST

Submitted by: Thera-Plast Company
154 Nassau Street
New York 38, N. Y.



Sources and Cost

Manufacturer and distributor
Thera-Plast Company
154 Nassau Street
New York 38, N. Y. Price - 2 oz. tin $2.50

Also available at local surgical supply houses

Description

Thera-Plast is a moldable silicon plastic, sold in 2-ounce tins in which it is kept when not in use. It is manipulated in the hands by closing and opening the fist and is capable of being stretched, molded, squeezed, snapped, rolled, and bounced like a ball. Pressed on newsprint, it will pick up an impression, which can be distorted amusingly by pulling the material. These properties make Thera-Plast attractive to children and adults alike and stimulate an interest in this form of finger exercise. While Thera-Plast is not sticky, it is just adhesive enough to cling to the hand, thus being easier to hold than a rubber ball. The slight flow of the material gives an illusion of motion, even in a hand too weak to effect it, and this encourages the patient to persevere.

Purpose and Use

Thera-Plast is an exercising material used in the supportive treatment of disabilities involving the fingers, hands, wrists, or forearms. It is an aid in developing strength and increasing range of motion and co-ordination. It has been found a useful therapeutic aid in some cases of poliomyelitis, cerebral palsy, arthritis, and fracture.

HOLDING GLOVE FOR EXERCISE

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Designed by Anthony De Rosa, PTR

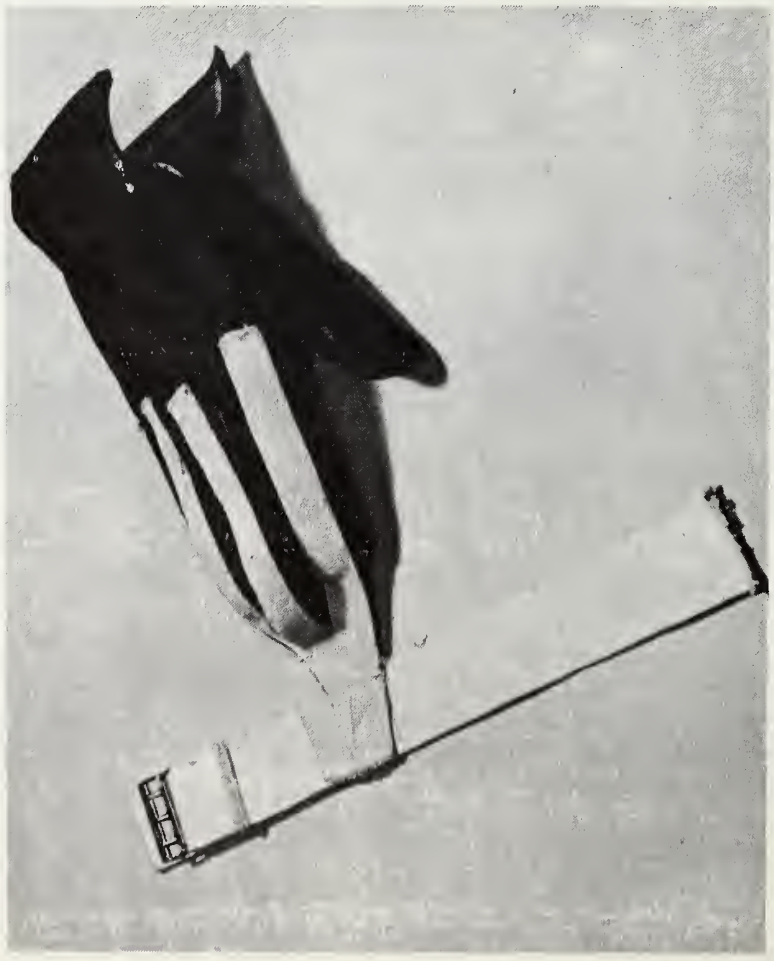
Cost depends on price of the lined leather gloves ($2.00 and up). In addition, there is the elastic (about 50 cents) and the labor. Sewing is done by hand.

Description

The holding glove is made from any durable leather glove with cotton or similar lining. Over the dorsum of each of the four fingers a one-half-inch webbing tape is sewn, extending from just below the metacarpo-phalangeal joint to beyond the tip of the fingers. The total length of the tape strips is six inches. These strips are then converged together at their distal ends and the end sewn to a 1½-inch web strap. This web strap fits around the wrist and is held by a metal buckle. A V-shaped piece is cut out of each side of the glove, with apex toward the fingers. This permits the glove to lie smoothly over the wrist without bunching under the wrist strap.

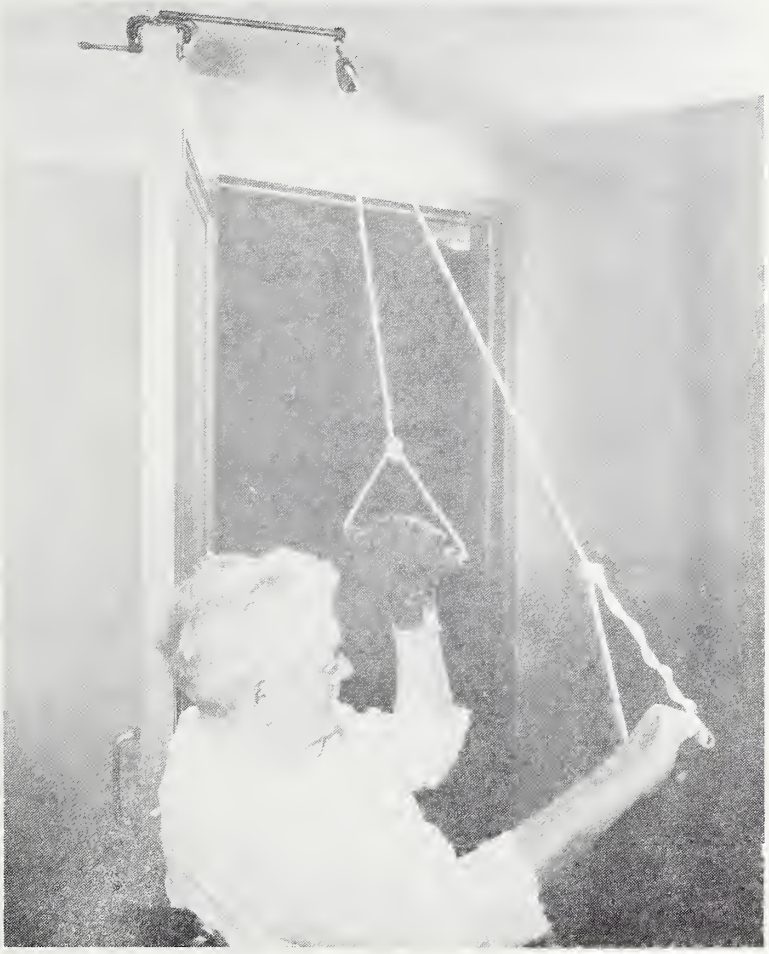
Purpose and Use

The purpose of the glove is to enable patients with inability to grasp, because of weakness of fingers and hands, to hold on to pulley handles, bar bells with weights, or other exercise equipment, in order to continue on a program of progressive resistive exercises for the musculature of the shoulders and upper portions of the upper extremities. The glove has also been used in occupational therapy to enable patients with the weakness described above to hold and use a wood saw and other tools.



PORTABLE PULLEY

Submitted by: Department of Physical Medicine
Lenox Hill Hospital
76th Street and Park Avenue
New York, N. Y.



Source and Cost

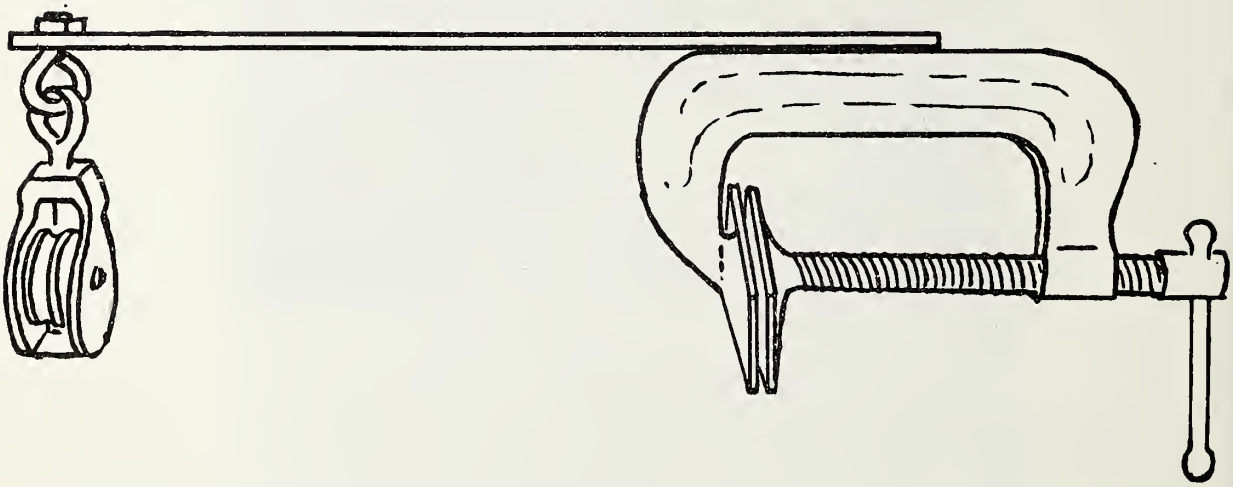
Designed by Lawrence Greenbaum (deceased).

Description

The device consists of a 10-inch length of metal, 1/4 inch in thickness and 3/4 inch wide. On one end is attached a large metal screw eye, from which a single pulley is hung. On the other end a medium-sized C-clamp is soldered. (Position is shown in drawing.)

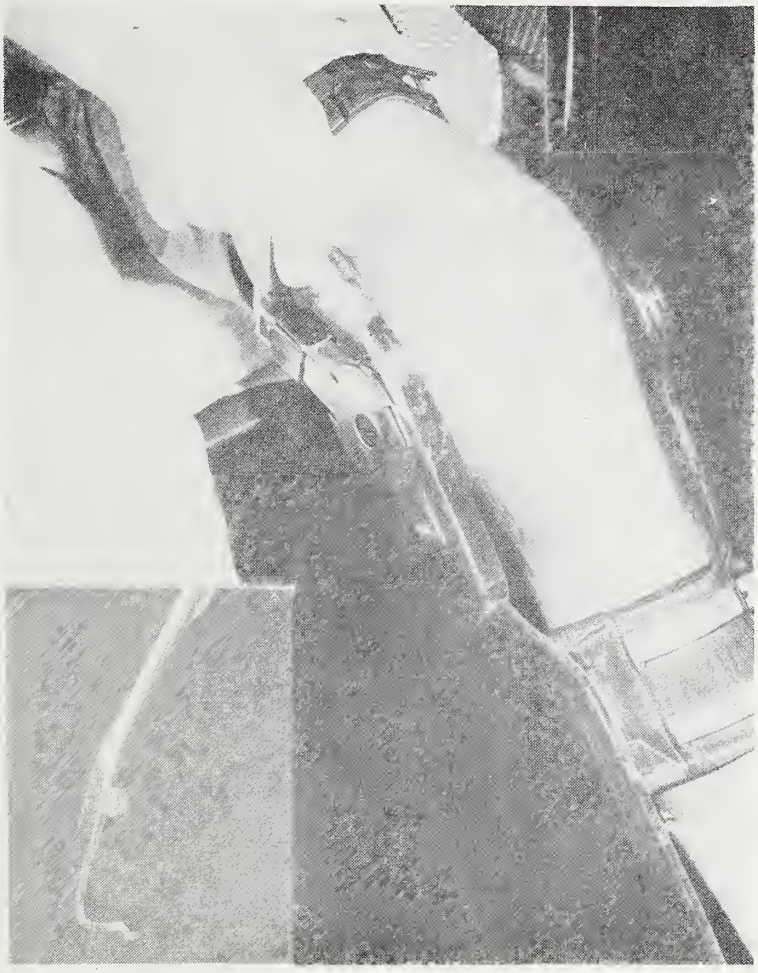
Purpose and Use

The purpose of the device is to provide a pulley, suitable for exercise in the home, that can be easily set up and that does not have to be attached permanently to the wall or ceiling. The portable pulley is clamped on to the top of any convenient door (as shown in illustration) or any similar location.



BRACE LOCKING LEVER

Submitted by: Physical Medicine and Rehabilitation Service
Veterans Administration Hospital
Richmond, Virginia



Source and Cost

Produced locally. Cost approximately $2.00.

Description

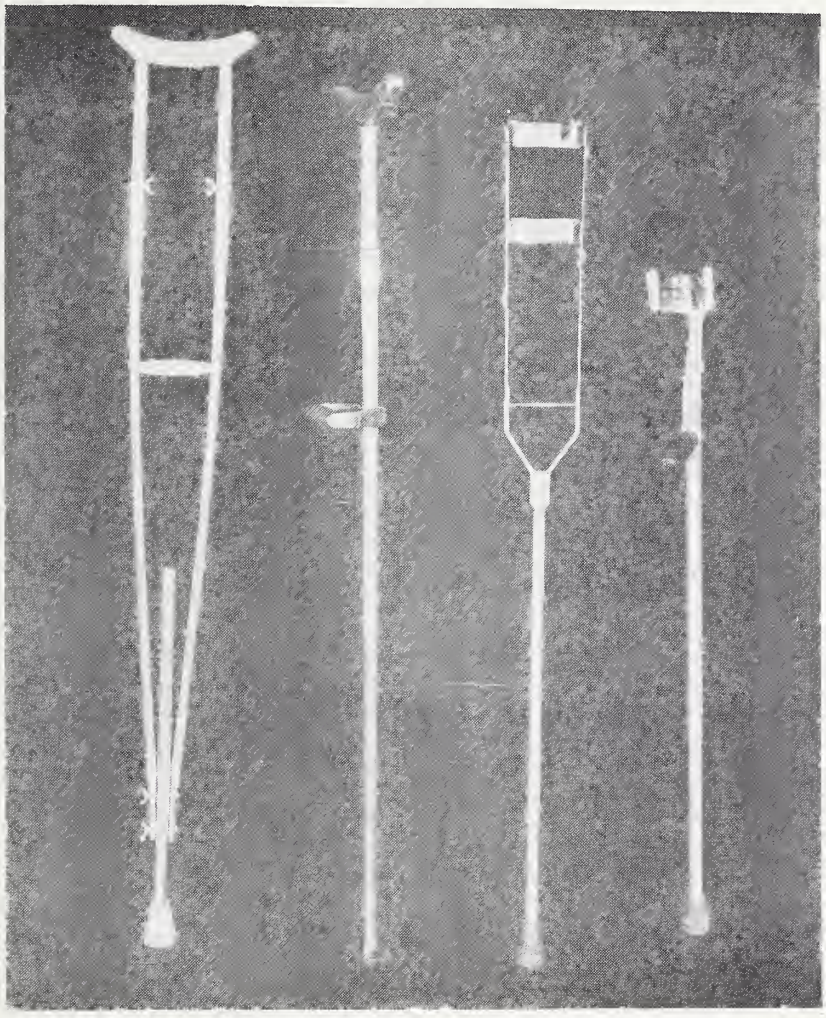
The lever is constructed of $\frac{1}{4}$-inch metal, - length depending on disability. At lower end the lever is formed to make a lip which fits under brace upright a few inches below knee lock. A guide is attached on the under side of the lever where it passes over the knee joint.

Purpose and Use

When the lever is put in place, the knee lock being used as a fulcrum, pressure applied to the handle will lock the brace. This device is applicable to the hemiplegic or arthritic.

SOME NEW ALUMINUM CRUTCHES

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Sources and Cost

a) All-Weather Crutch, Inc. 17 Cove View Drive Stamford, Connecticut	Size 18" - 28" 23" - 35" 33" - 45"	8.00	(with adjustable tops also, 1.00 more on the price of each.)
b) Guy G. Eidman (inventor) 2810 Nueces Street Austin, Texas	Manufacture indefinite at present		

Description

a) All-Weather Crutch. This aluminum crutch follows the form of the conventional wooden adjustable crutch except that it is adjustable also in the upper portion of the shaft above the hand-grip. The arm-rest and hand-grip are made of wood. The crutch comes equipped with rubber suction cup tip. It is made in four sizes, adjustable from a minimum of 18 inches to a maximum of 65 inches. There are different models for men and women, the women's being more streamlined. In the largest size, men's style, the crutch weighs two pounds.

b) The Comfortable Crutch. This is a single shaft aluminum crutch, the shaft being adjustable by means of a series of holes, held with male and female type screws. The hand-grip is adjustable not only in height, but can be rotated around the shaft to any desired position by the adjustment of one screw. The arm-rest is provided with springs, giving a rocker action to absorb shock or jar. The extra large, rectangular, non-skid tips make a secure base.

c) The Lofstrand Featherweight Crutch. This crutch is a single shaft, aluminum, and adjustable in height both below and above the hand-grip. The adjustment feature is a series of holes with a special spring lock. It is easily and quickly adjusted. The handle extends forward and is gripped in the usual manner. The upper shaft of the crutch is shortened, extending only to mid-forearm, and provided with a spring steel arm clip. It comes in both adult and junior sizes, the arm clips plain or rubberized.

d) The Canadian Crutch. This crutch, similar in style to the conventional crutch, but shorter and without the arm-rest, gives support by means of two arm cuffs, one above the elbow and one below. The crutch is made of aluminum, with wooden hand-grip and leather lined arm cuffs.

Purpose and Use

a) The All-Weather Crutch is adjustable to the user's arm length as well as to his height. The aluminum is light-weight, durable and smart looking.

b) The Comfortable Crutch also is adjustable to arm length and to height. The single shaft style is convenient and many persons consider it preferable to the conventional model as better looking and less inclined to catch on things. This crutch is especially strong and long-wearing.

c) The Lofstrand Crutch eliminates any tendency to lean on the arm pits while at the same time giving particularly firm support to the weight of the body. When the user's elbows are bent, his arms are held securely in the cuffs and his body is still adequately supported even though his hands may be busy.

Purpose and Use (continued)

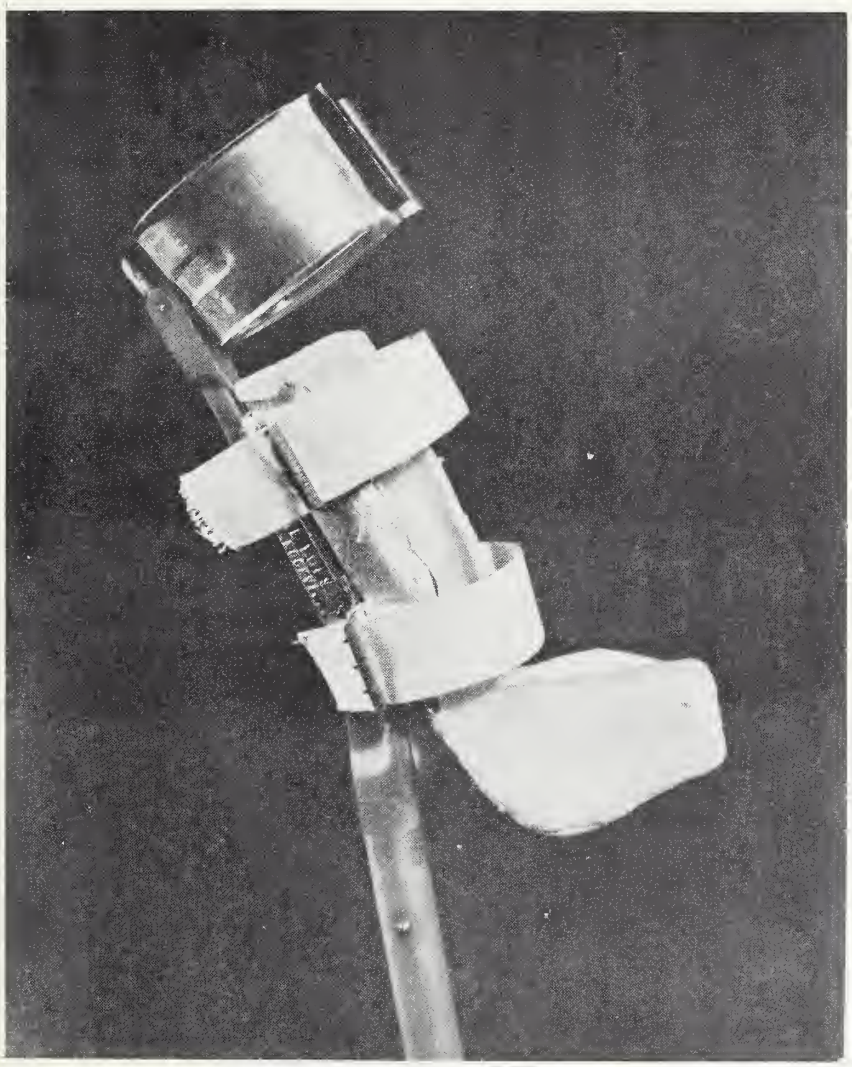
d) The Canadian Crutch, like the Lofstrand, prevents the user from leaning on his arm pits and in addition gives the extra support needed by persons with weak triceps.

Sources and Cost (continued)

c) Lofstrand Company Rockville, Maryland	Adult crutch - extra long Made to specified hand height	21.50
	Adult crutch 29" - 35" Adjustable hand height	20.50
	No. 2 Junior crutch 25" - 31" Adjustable hand height	18.50
	No. 1 Junior crutch 20" - 26" Adjustable hand height	18.50
	Solid tube crutch, custom made to specified hand height	18.50
Rubberized arm rests -	Junior	2.35 each
	Adult	2.50 each

ATTACHMENT FOR LOFSTRAND CRUTCH

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Made in workshop. Cost: approximately 1.50

Description

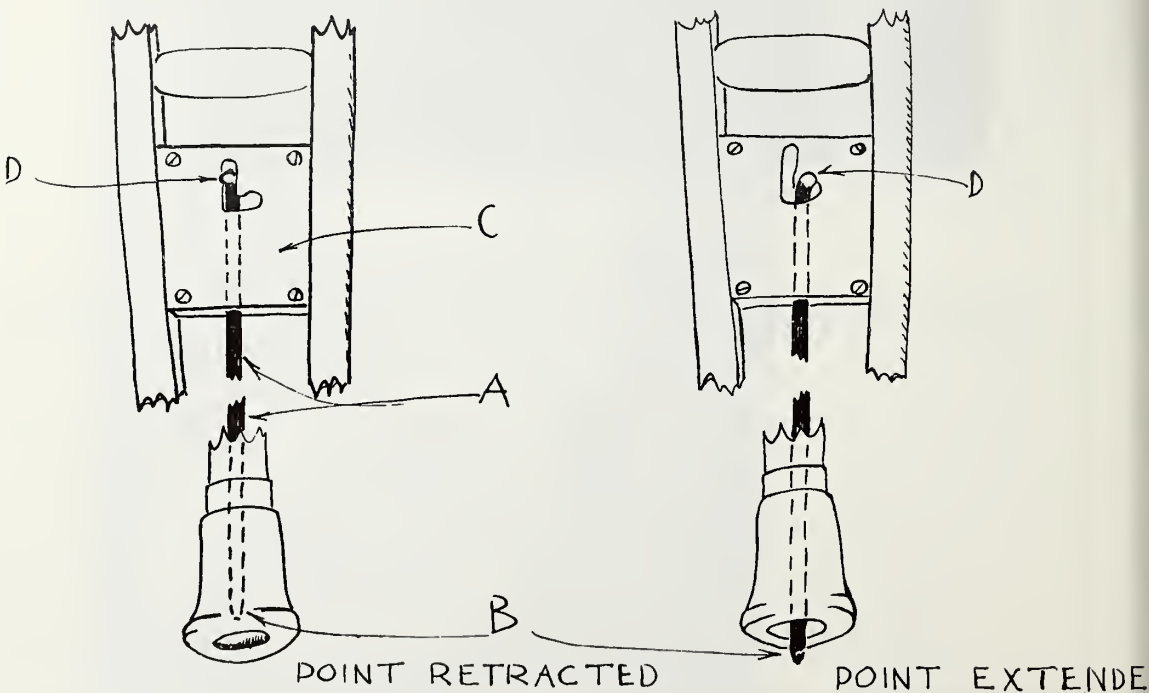
A - Metal rod
B - Point
C - Wooden block screwed on to metal faceplate which is slotted to permit rod D to slide and lock mechanism. Block is bolted to crutch.
D - Very short rod attached perpendicularly to rod A and parallel to ground.

When point is needed, as in walking on ice, rod D is pushed down with the thumb to bottom of slot and point is extended. D is then pushed over in slot and mechanism is locked in position. When point is no longer needed, it may be retracted. A small coil spring holds the rod in the retracted position. A channel is mortised through the crutch, and the bottom members are re-enforced with metal bands. A small hole, slightly larger than the diameter of rod A, is drilled through the center of the crutch tip so that the point may be extended. The point B and the rod A are separate units, so that when the point becomes dull it may be removed, resharpened, and replaced. This will seldom be necessary.

The device is very effective and is simple to operate. The only maintenance required is a little lubricant from time to time, the best being light machine oil.

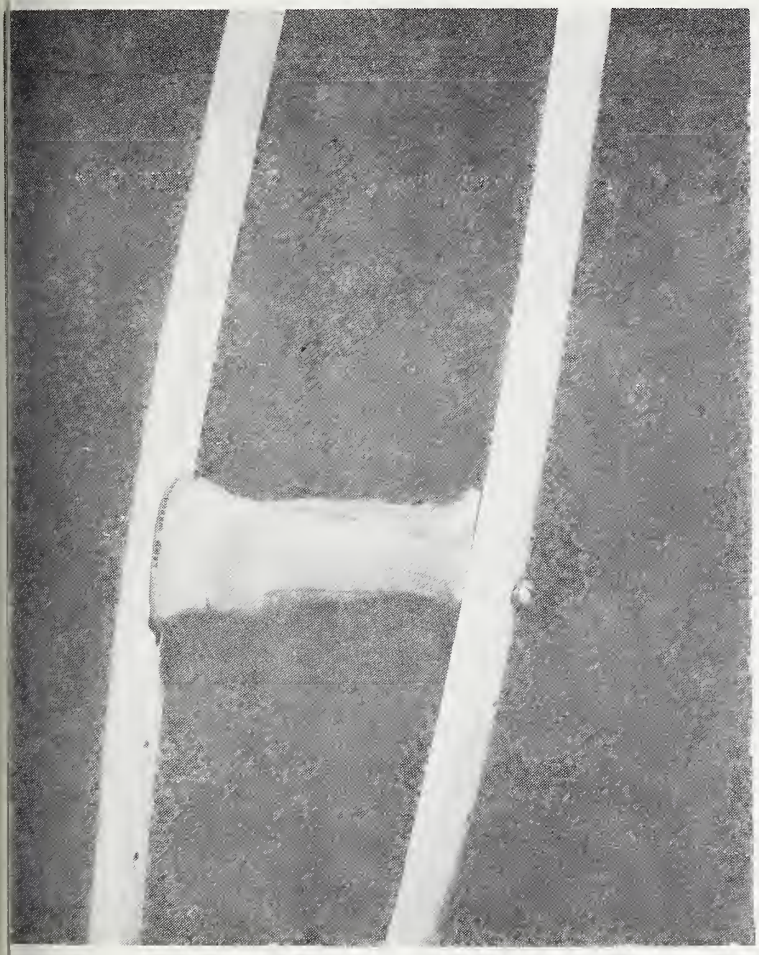
Purpose and Use

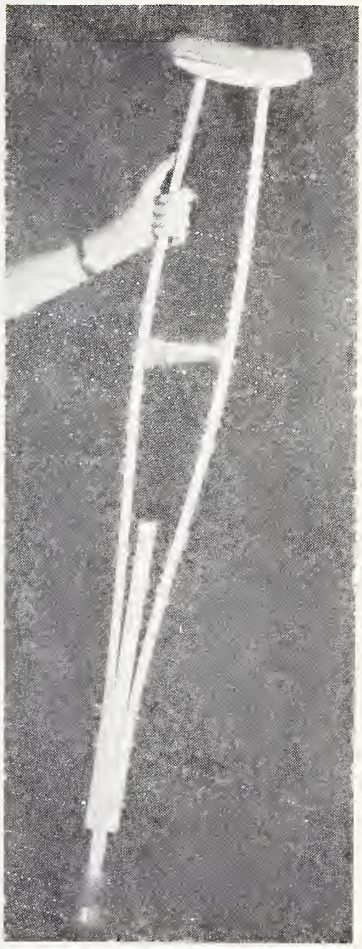
During the months when streets and sidewalks may be icy in spots, crutches so equipped will add greatly to the walker's confidence and safety.



THE LAMB CRUTCH HANDLE

Submitted by: Thomas Lamb, Designer
274 Madison Avenue
New York 16, N. Y.





Source and Cost

Lamb Crutch Handle
Manufacturer and distributor
Thomas Lamb, Designer
274 Madison Avenue
New York, N. Y.

Two sizes - adults No. 165 about 20.00*
children No. 198

Davol Safety Crutch Tip
Manufacturer
Davol Rubber Company
Providence, Rhode Island

1.25

*The inventor is aware that the price of these handles is excessive and hopes to have them available in quantity at a much lower figure.

Description

The Lamb crutch handle is hand-carved in hard wood to fit the natural grip and is easily inserted into a wooden crutch.

Purpose and Use

The shape of the handle, its pleasantly smooth grain, and its position, together make for a more comfortable and secure grip, hence more efficient walking, than is possible with the old type of crutch handle.

The insert shows a wooden crutch completely equipped with Lamb Crutch Handle, Davol Safety Crutch Tip, and Guardian Crutch-Eze Cushion.

Source and Cost (continued)

Guardian Crutch-Eze Cushions No. 300

Manufacturer:
Guardian Latex Products Co.
Los Angeles 41, California

Distributor:
PerfeKtum Products Co.
300 Fourth Avenue
New York 10, N. Y.

ADJUSTABLE CANE

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Designed by
Anthony De Rosa, R.P.T.
Burke Foundation
Mamaroneck Avenue
White Plains, N. Y.

Made from scrap material.

Description

The canes are made of 3/8-inch aluminum tubing, bent in at a right angle 8 inches from the distal end. The horizontal section, which lies along the floor, is covered with a rubber sleeve. Wooden or rubber bicycle grips are used for handles.

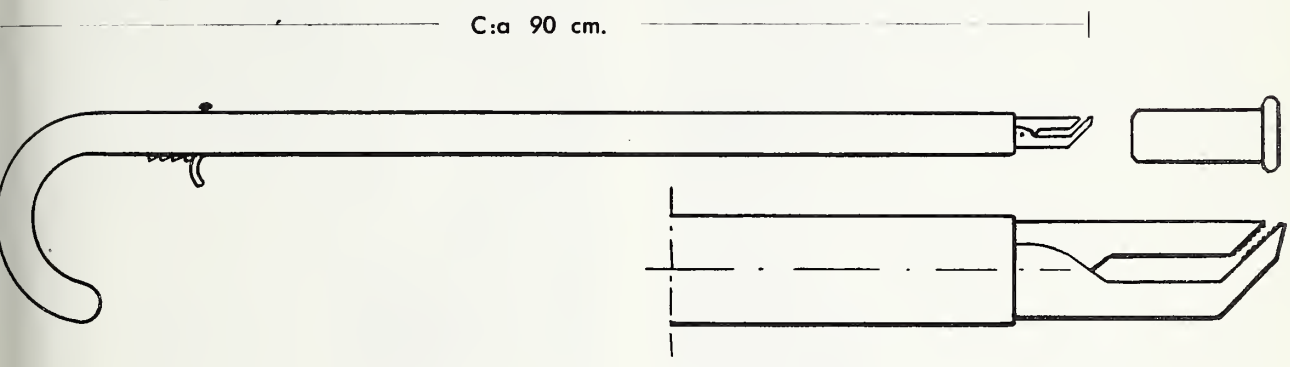
Purpose and Use

The canes were devised to help patients break up the pattern of festination and/or retropulsion found in Parkinson's disease. Patients can step over the canes without danger of tripping.

SWEDISH GRIPPING CANE

"GRIPKAPP"

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden



Source and Cost

Manufacturer
Norrbackainstitutets Finmekaniska Verkstad
Norrbacka, Stockholm, Sweden

Price: 50 crowns
(about 10.00)

Description

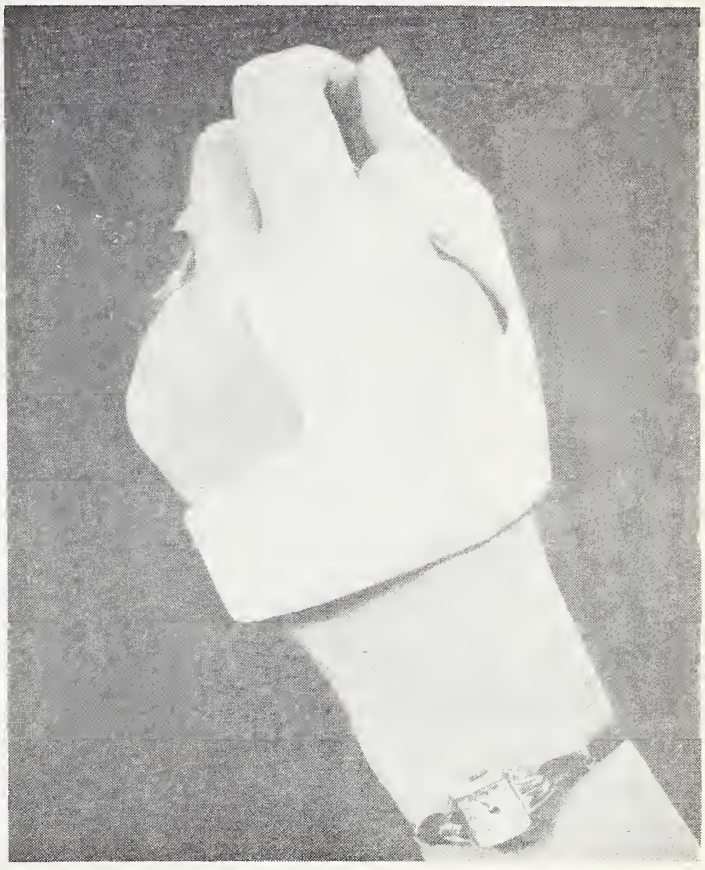
The cane is made of light metal, with wooden handgrip. The gripping equipment is made of steel hardened and annealed and nickel plated. The tip is of rubber, equipped with a pin for winter walking. The shaft of the cane is lacquered in black. The handgrip is stained and polished. This cane can be used as a conventional walking stick, but is easily transformed into a gripper. This is accomplished by removing the tip and using the convenient lock mechanism. The jaws of the gripper are manipulated by means of the trigger in the handgrip.

Purpose and Use

While the gripping cane could be used by wheel chair patients, it is intended primarily for persons who can walk, but cannot stoop. It would be especially convenient for those who must walk with the aid of a cane, such as arthritics and those who wear braces.

OPPONENS SPLINT

Submitted by: New York State Rehabilitation Hospital
Occupational Therapy Department
West Haverstraw, N. Y.



Source and Cost

Made in workshop.

Plexiglas distributor:
Berton Plastics, Inc.
585 Sixth Avenue
New York, N. Y.

Price:	1/16-inch	$1.25 sq. ft.
	1/8-inch	1.60 sq. ft.
	3/16-inch	1.95 sq. ft.

Description

The splint is made of Plexiglas, 1/16-inch, 1/8-inch, or 3/16-inch in thickness, fashioned in the following manner:

Opponens Splint B

Thumb position: abduct thumb toward ventral surface of the wrist, adduct thumb toward midline of hand, rotate the metacarpal bone so that the thumbnail shows in palmar view. Cover thumb, metacarpals and carpals with strips of wool or felt, taped together in two-layer thickness.

To heat and bend plastic: (a) circle - bent around dowel, can be made larger as contracture decreases, (b) bend thumb tabs over wool-protected thumb, then around back of hand to ulnar side; (c) make slightly smaller, cool, try on, adjust as desired; (d) relieve pressure spots by rounding shape. There should be no pressure over joints. Slight firmness on thumb and little finger metacarpals is necessary for good position.

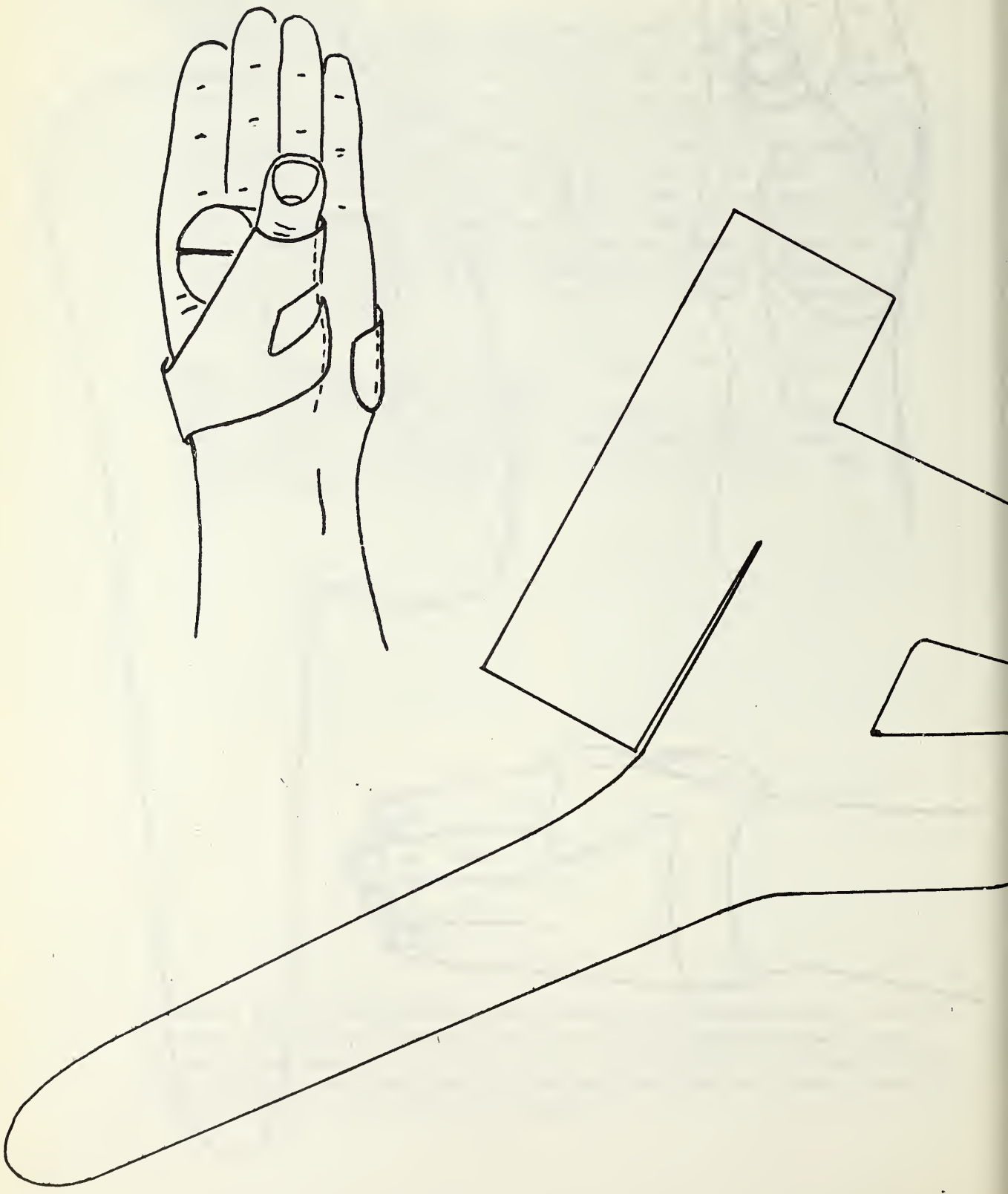
Opponens Splint A - non-circle type - used when no thumb adduction contracture is present.

This splint is made with thumb in same position as above. Heat and bend plastic; thumb enclosure bent first, then tab in front of second and third metacarpals; finally bend plastic around back of hand.

Plastic is not the most desirable medium for these splints, as it breaks easily and fitting is difficult and time-consuming, some hands being impossible to fit. The samples shown in illustrations were made at the Institute of Physical Medicine and Rehabilitation from Celastic, an alternative material.

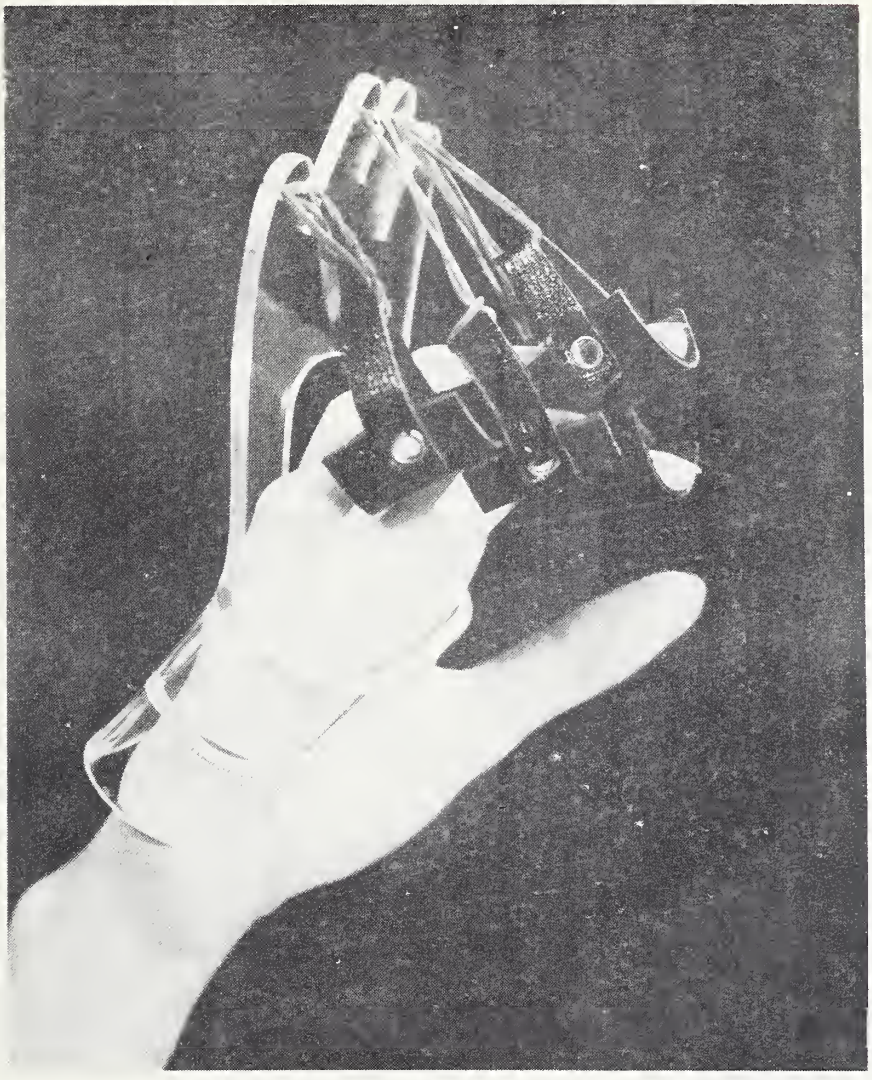
A. OPPONENS SPLINT

B. OPPONENS SPLINT
WITH
ROLL FOR THUMB ABDUCTION



FINGER EXTENSION SPLINT

Submitted by: New York State Rehabilitation Hospital
Occupational Therapy Department
West Haverstraw, N. Y.



Source and Cost

Made in workshop

Plexiglas distributor
Berton Plastics, Inc.
585 Sixth Avenue
New York, N. Y.

Price:		
	1/16"	1.25 sq. ft.
	1/8"	1.60 sq. ft.
	3/16"	1.95 sq. ft.

Description

The splint, designed as shown in illustration, is made of 3/32-inch Plexiglas in the following manner:

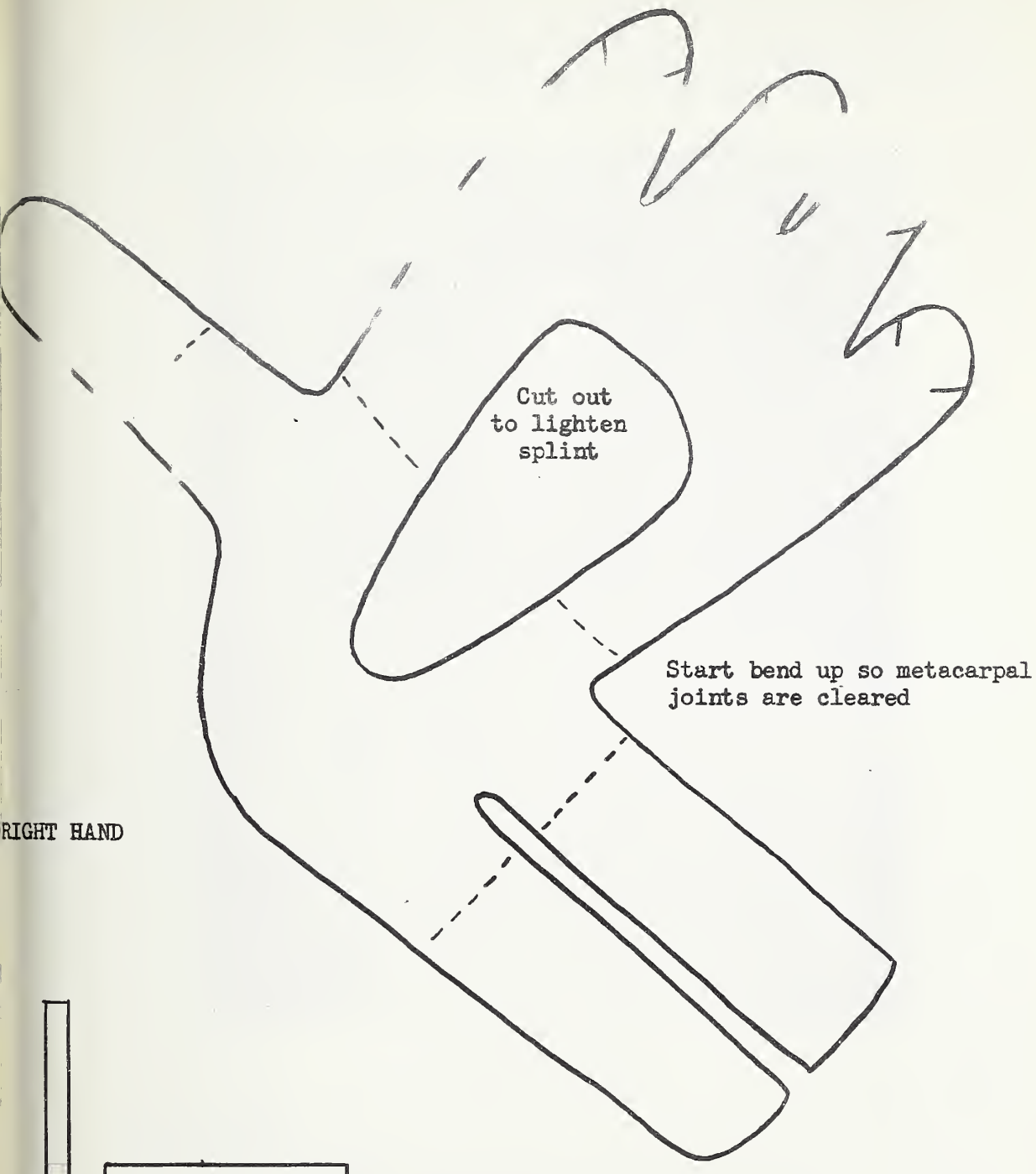
To bend: (a) wrap tabs around second and fifth metacarpals, and
(b) arch finger extension section.

Attach leather loops with elastic bands to notched plastic over-fingers. These hold distal ends of fingers and thereby extend fingers.

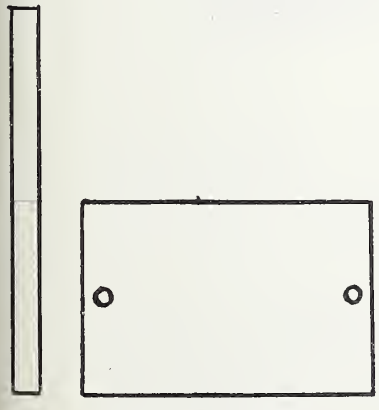
Purpose and Use

The splint is intended to maintain good position of extensors rated as trace or poor, and to prevent contractures caused by tight flexors. It offers added resistance when weak finger flexors are exercised, as in typing, for example.

FINGER EXTENSION SPLINT



RIGHT HAND



Cuff and Band

tute of Physical Medicine and Rehabilitation, 325 East 38th Street, New York 16, N. Y.

PROSTHETIC SHOULDER

Submitted by: The Prosthetic Service
Institute of Physical Medicine and Rehabilitation
400 East 34th Street, New York 16, N. Y.

Source and Supply

Made in the
Prosthetic Service
Institute of Physical Medicine and Rehabilitation
400 East 34th Street, New York 16, N. Y.

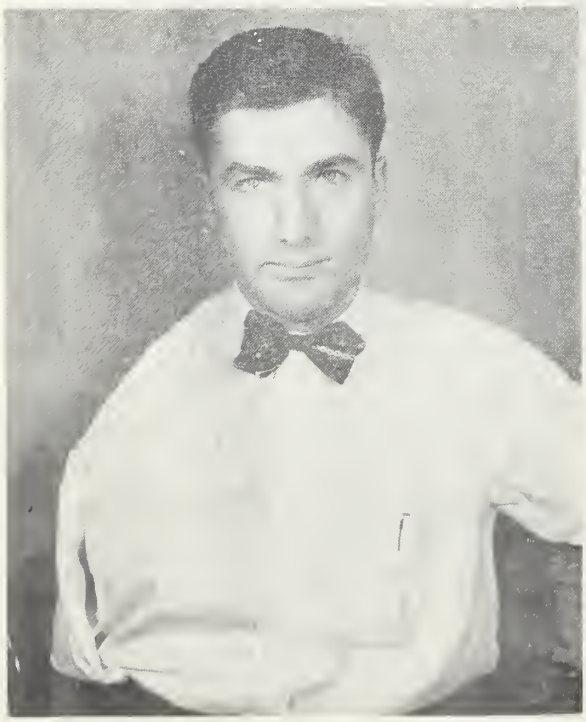
Makers of Ortho-Ply and Ortho-Roc
Vernon-Benshoff Co.
P.O. Box 1587
Pittsburgh 30, Pa.

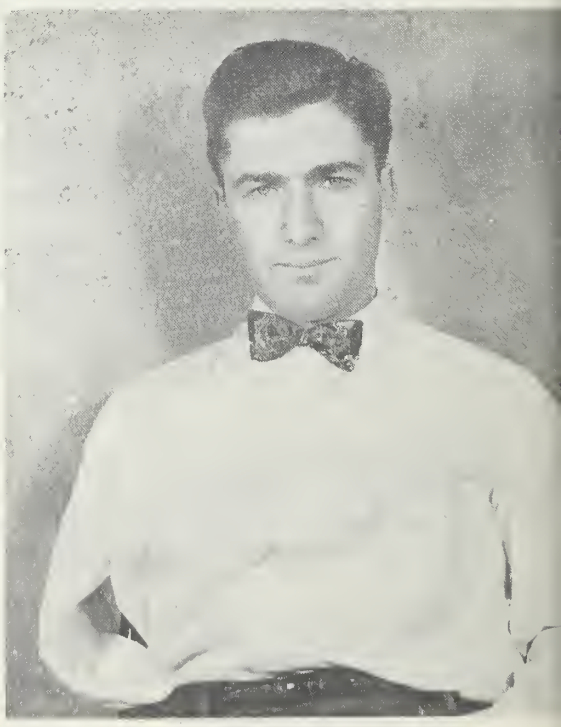
Description

The molded shoulder piece is made from Ortho-Ply - a fibre glass product - and lined with leather on the surface that lies against the site of amputation. The device is held in place by straps of cotton webbing, which are attached front and back through slots in the Ortho-Ply and placed around the upper chest and under the opposite arm. No attempt will be made to described in detail the method used in making the molded shoulder piece, but instructions in the use of the material can be obtained from the company that sells it. In brief, an original mold of plaster was made to cover the site of amputation and this was built up to form a shoulder and upper arm, corresponding to the remaining shoulder. A master (or positive) mold of Ortho-Roc was made from the plaster mold. Next, Ortho-Ply was molded over this and allowed to dry. (The master mold was made in two sections, a and b.) After being removed from mold, the shoulder was trimmed and sanded to fit, the two pieces were glued together, and piece a was lined with leather. The whole device is light in weight, fits snugly, and can be kept clean with soap and water (leather excluded). A new shoulder model just completed is lined with elasticized nylon satin, and this material is available also.

Purpose and Use

This prosthetic shoulder was constructed mainly for cosmetic purposes. The patient was unable to keep shirt or coat in place on side of amputation and was constantly annoyed by having to pull the garments into position. This annoyance was sufficiently irritating to affect his work. The illustration A shows patient without the device and B illustrates his appearance when the device is worn.





WHEEL CHAIRS

This report, the fourth in our series, is devoted exclusively to wheel chairs and wheel chair accessories.

There are many different kinds of wheel chairs being made. The chair preferred at the Institute is the collapsible type, made of light-weight, chromium-plated metal tubing. This wheel chair is comfortable, very neat looking, comparatively light, can move freely in a small space, is easily folded for automobile travel, and even can be put into and taken out of most modern taxicabs without disturbing the patient. In this general type of wheel chair there are many individual styles, and in selecting a chair the choice should always be made in accordance with what best meets the needs of the individual patient, considering both the nature of his disability and the character of his surroundings, at home and wherever else he regularly goes. A few generalizations can be made.

A wheel chair often used on the street should have its large propelling wheels in the rear and these wheels should be 24 inches in diameter. When the chair is used only in the house, the propelling wheels may be smaller and should be at the front of the chair, unless the patient's trunk muscles are so weak that he is in danger of falling forward. The small wheels, usually of 5-inch diameter, should be 8 inches for street use, and this width is preferable also in the house, for convenience in crossing rugs and thresholds, although 5-inch wheels are permissible when it is desirable to keep the chair in as small a compass as possible. A special chair has been designed for bilateral amputees, with the large rear wheels set farther back to compensate for the loss of weight of the lower extremities and without foot rests. On any chair brakes are essential, both to prevent rolling on an incline and to permit the patient to get in and out of the chair safely without help from another person.

As a rule, the fewer accessories a wheel chair carries the lighter and easier it is to handle. Yet, a patient able to propel his own chair by hand will surely want handrims, and anyone obliged to remain long at a time in his chair will appreciate an airfoam cushion and some sort of leg rest panel. Adjustable leg rests are a real necessity for those whose legs are in varying degrees of flexion or extension, and the head rest extension and adjustable back should be prescribed for quadriplegia patients. Many accessories, like the wheel chair tray and the reading rack, are helpful to have, while the special arm rests

or the swinging foot rests will make a particular appeal to anyone having a particular need for them. But too many additions to one chair could make it almost unmanageable.

Although the collapsible wheel chair described above is considered an improvement over some of the older models, it is not yet perfect by any means. For instance, a rigid seat and a rigid back would be very much better for the user's posture, and hence for his general health, than are the slack seat and back of the present folding chair. And the need for arms that can be adjusted at different heights is acknowledged by the built-up arm rest and by the removable arm rests, since sometimes higher support is needed and sometimes arm rests at even the usual height are in the way. For patients unable to get in and out of their wheel chairs when they are alone, it is unfortunate that the present construction of the chair will not permit it to be wheeled over the toilet, so that their only recourse is the obviously undesirable expedient of a commode in the chair itself. It is to be hoped that these and other disadvantages of today's wheel chair will be overcome in time as more and more persons turn their minds to the problems of the wheel chair patient.

We have not considered motorized wheel chairs. This omission is made partly because we have had no experience with such chairs and so cannot tell how reliable or how safe they may be, and partly because motorized wheel chairs are not only usually heavy and cumbersome, but so expensive as to be out of the question for most people.

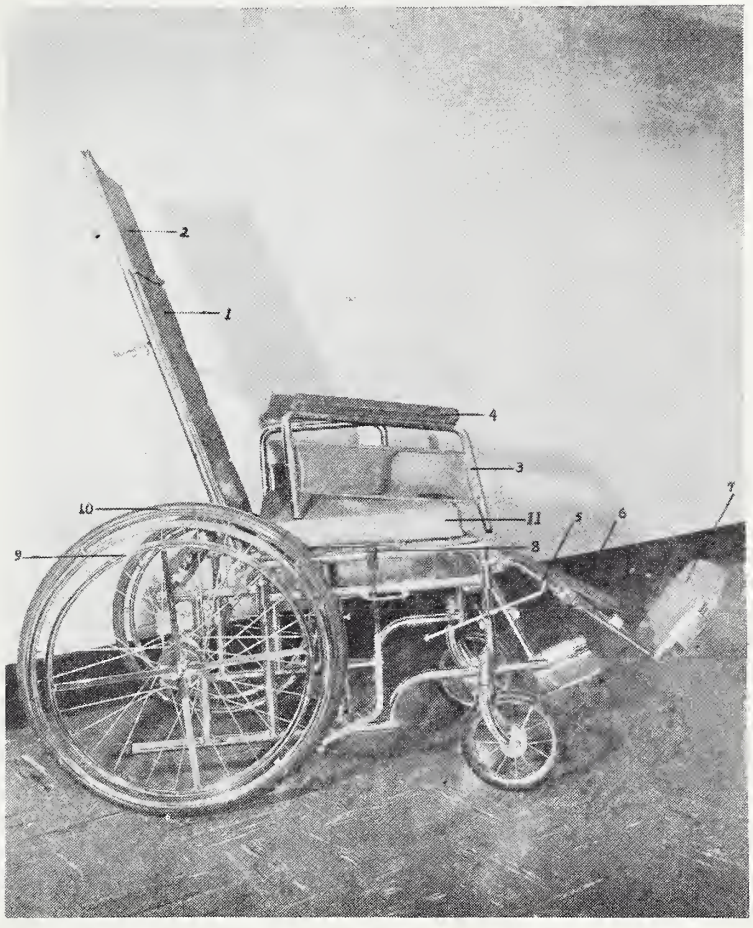
In this manual we have brought together a number of devices that have added to the comfort of many and may be tried by any others for whom they can fill a need or perform a service.

The wheel chair specifications
given above were formulated by
George G. Deaver, M.D.

DEMONSTRATION CHAIR

Special model made by Everest and Jennings to demonstrate available accessories.

View A

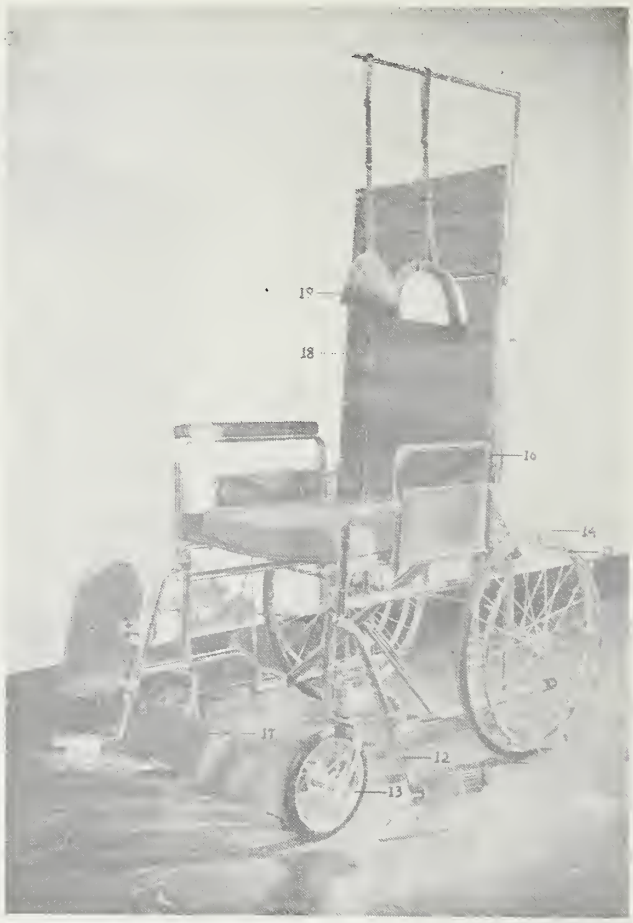


1 - Reclining back
2 - Extension head rest
3 and 4 - Detachable arms and upholstered arm rests
5 - Adjustable leg rest
6 - Leg rest panel, wooden (leather panel not shown)
7 - Swivel footboard
8 - Brakes
9 - One-hand drive
10 - 24" wheel
11 - Airfoam cushion

DEMONSTRATION CHAIR

Special model made by Everest and Jennings to demonstrate available accessories.

View B



12 - Swivel foot rest
13 - 8-inch casters
14 - 20-inch wheel
15 - Hand rim with propelling knobs
16 - Desk arm (detachable)
17 - Heel strap
18 - Zipper back (not used in reclining back - shown here for purpose of illustration only)
19 - Arm sling

The following are not shown:

20 - 5-inch casters
21 - foot blocks
22 - Bridgeboard

FULL RECLINING BACK

AND HEAD REST

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Manufacturer:
Everest and Jennings
761 N. Highland Avenue
Los Angeles 38, California

Distributor:
Your local hospital supply house or
any distributor of Everest and Jennings wheel chairs

Head rest extension alone	7.50
Full-reclining back and head rest	66.00

Description

The full reclining back is available on Traveler model wheel chair only. It permits lowering back to any position as far as horizontal. The detachable head rest is furnished with this type back. The price includes control ratchets, wheel clamp screws, crossbar push handle, and lengthened wheel base to give proper stability. THE ADJUSTABLE LEG REST AND WOODEN LEG REST PANELS MUST BE USED WITH A FULL RECLINING BACK. Because of structural difficulties, the full reclining back cannot be furnished on Universal type wheel chair.

The head rest extension alone can be used with any of the Everest and Jennings wheel chairs. The standard hook-on type is 13" high and the telescopic type 10" high, for use with semi-reclining and full reclining back. The opening at the bottom allows insertion of small pillow for added comfort and support of head.

Purpose and Use

The full reclining back is prescribed when, for any reason, a patient needs frequent rest periods in a horizontal position. This may be true in many cases of quadriplegia and in some poliomyelitis cases.

The head rest extension may be essential in cases of specific weakness of back or neck. It might be restful for occasional use by any wheel chair patient. With full reclining back, the head rest extension is always used.

DETACHABLE ARMS - DESK ARMS - UPHOLSTERED ARMRESTS

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Manufacturer:
Everest and Jennings
761 N. Highland Avenue
Los Angeles 38, California

Distributor:
Your local hospital supply service or any distributor of Everest and Jennings wheel chairs

Detachable arms	36.50	Upholstered armrests	10.00
Desk arms		Wooden armrests -	
Permanently attached	33.50	same as above but	
Detachable	41.50	only 1" thick, hard wood, natural finish	7.50

Description

Detachable arms, made of tubular steel, are shaped like the standard arms, with sockets welded to frame of chair to receive the ends of these arms, with special telescoping fixtures on the seat to permit folding and a re-enforcing brace under seat of chair. The height of the arms is in accordance with customer's specifications. On a chair with detachable arms, leatherette - instead of mohair - is advised for back and seat to facilitate sliding. These arms add $1\frac{1}{2}$" to over-all width of chair.

Desk arms, made with a jog at front corner, are offset to the side, giving a 2" additional space between front posts and arm rests. Height of both levels is made to customer's specifications, and depth of jog as well. Desk arms can be made permanently attached to the chair or detachable.

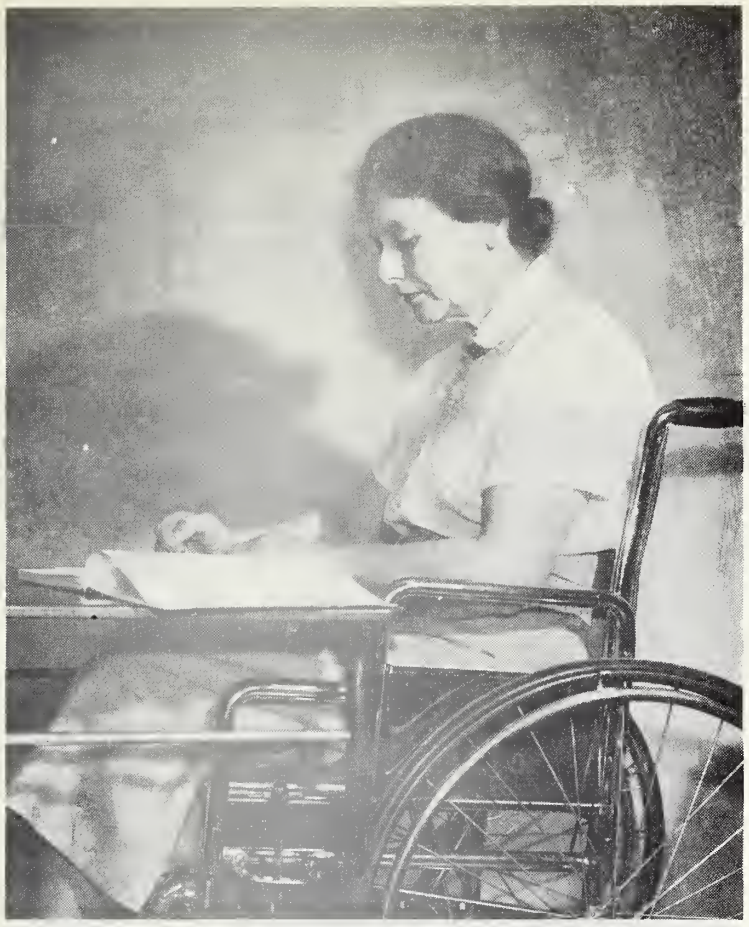
Upholstered arm rests (shown in picture on front of this page) furnish broad, comfortable supports that do not increase the width of the chair. Made with a hardwood base, the arm rests are bolted through two holes in chair tubing and covered with a layer of soft rubber and fabric to match chair upholstery. The arm rests are approximately 2" thick and $2\frac{1}{4}$" wide, but can be made removable at extra cost. They raise arm height $1\frac{1}{4}$ inches. Desk arms also can be upholstered if desired.

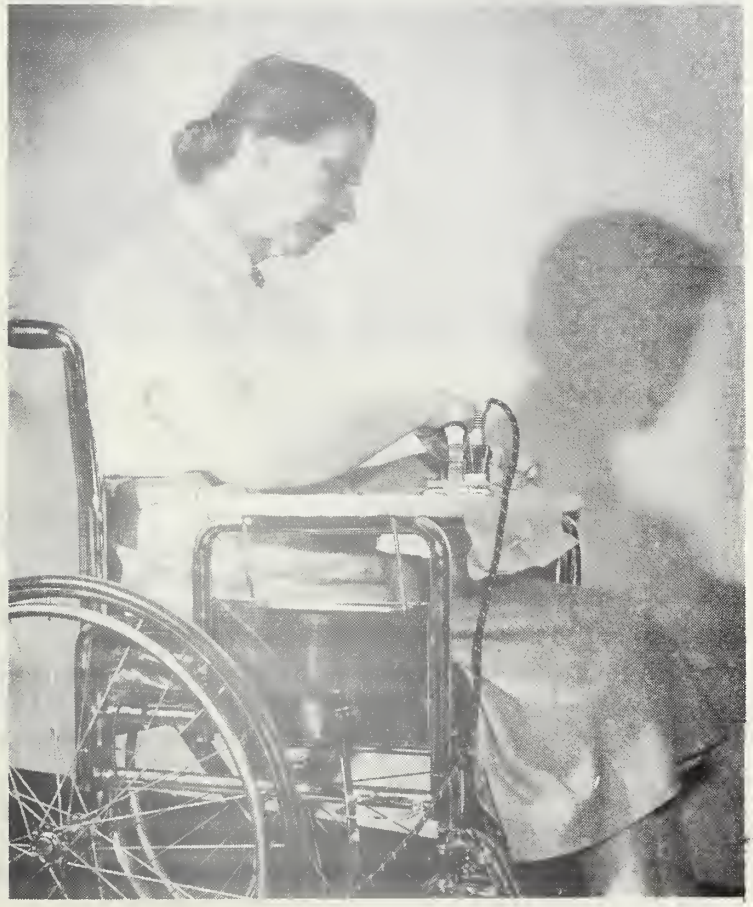
Purpose and Use

Detachable arms, when removed, permit entering and leaving the chair from the side. They also allow very close approach to desk or table.

Desk arms permit a close approach to low desk or table. They are suited especially to office use. Removable desk arms, when turned the other way around, will support a small ironing board and at the same time leave the user's elbows free. (See illustration.)

Upholstered arm rests will add to the comfort of anyone who spends much time in a wheel chair. A weak or spastic arm can be bound to the arm rest, thus keeping both arm and shoulder in correct, restful position.





ONE-ARM DRIVE WHEEL CHAIR

Submitted by: Physical Medicine and Rehabilitation Service
Bellevue Hospital
New York 16, N. Y.

Source and Cost

Manufacturer:
Everest and Jennings
761 N. Highland Avenue
Los Angeles 38, California

Distributor:
Your local hospital supply house or any distributor of Everest and Jennings wheel chairs

Traveler Model One-Arm Drive Chair	149.50
Universal Model One-Arm Drive Chair	159.50

Description

This is a new Everest and Jennings folding chair that can be guided and propelled with one hand. The one-arm drive consists of two handrims on the side of the patient's good hand. The inner handrim is connected to its wheel in the usual manner, while the outer handrim is connected to the opposite wheel by the use of a removable axle. (This axle is easily removed when the chair is folded.) The one-arm drive can be installed on either the right or left hand side, depending upon the needs of the patient. It can be changed to the opposite side for another patient, but it cannot be installed on chairs already built.

When the patient grasps and propels the two handrims together, the chair will go forward in a straight line. When either handrim is propelled independently, the chair will turn to the right or left, depending upon the handrim used.

Purpose and Use

The new one-arm drive permits a wheel chair patient having the use of only one hand to guide and move his chair with almost as much ease as if he had the use of both hands. The device will be helpful in cases of hemiplegia and upper extremity amputation, in some arthritis cases, or in any case where for any reason a wheel chair patient has full use of only one hand.

ADJUSTABLE LEG RESTS

with

PIVOT FOOT RESTS AND LEG REST PANELS

Source and Cost

Manufacturer:
Everest and Jennings
761 N. Highland Avenue
Los Angeles 38, California

Distributor:
Your local hospital supply service or any
distributor of Everest and Jennings wheel chairs

Adjustable leg rests with hard panels and pivot foot rests	45.00
Upholstered foam rubber panel pads for added comfort	4.00

Description

These fully adjustable leg rests can be adjusted individually to required elevation and length. The leg rest panels are upholstered to match the chair. Panels tilt on controlled swivel to automatically give greatest comfort.

The foot rests are attached to support-shafts by pivots so that they can be turned up and out of the way.

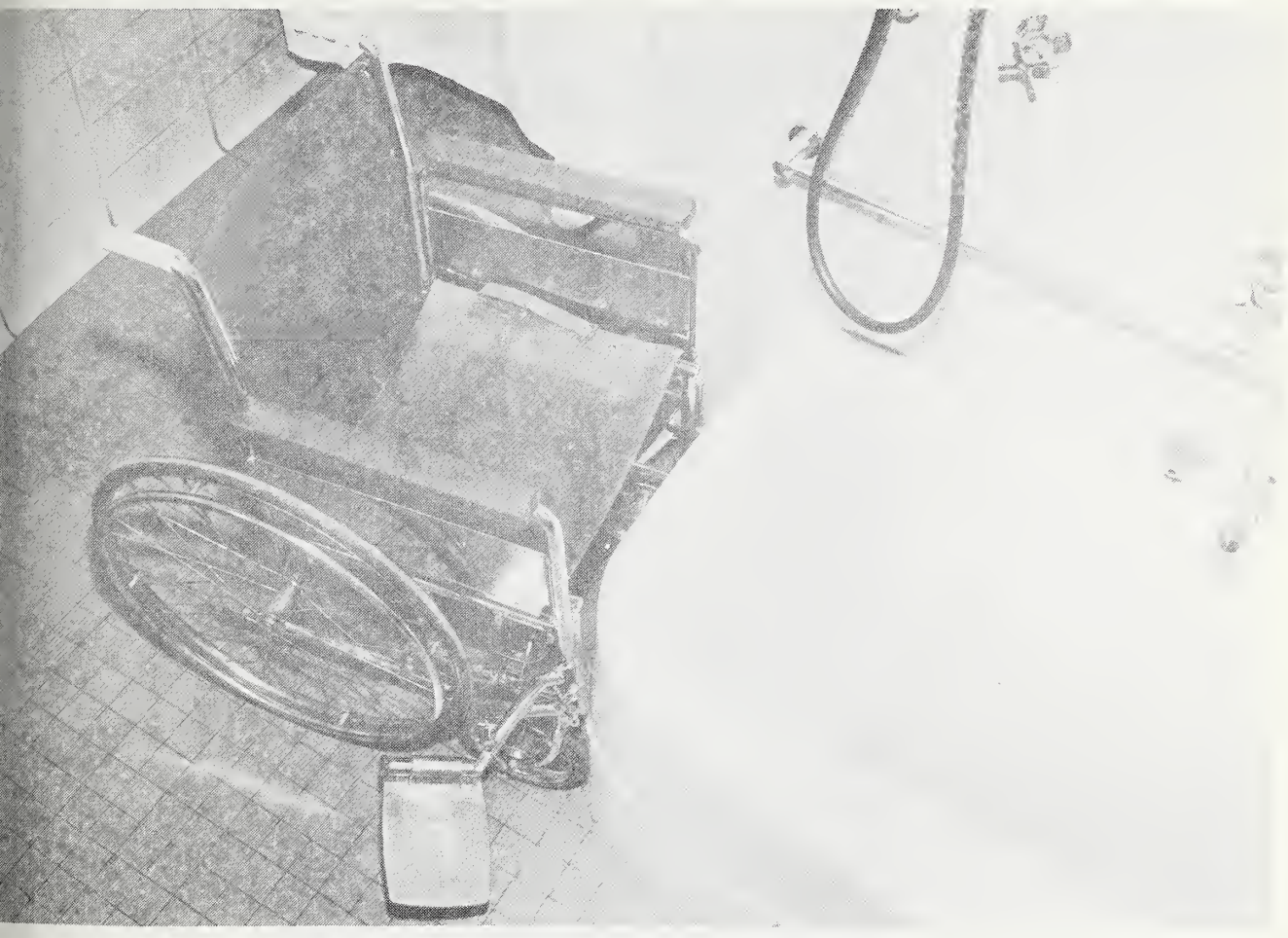
Purpose and Use

When for any reason the patient's leg is in a position of contraction, the leg rest can be extended to encourage extension. Conversely, if flexion is limited, leg rest can be lowered gradually to allow gravity to force the leg down. The leg rests operate individually so that patient's legs can be held at angle required for each.

With the foot rests out of the way, it is much easier for patient to rise from wheel chair and stand with crutches.

SWINGING FOOT RESTS FOR WHEEL CHAIRS

Submitted by: Physical Medicine and Rehabilitation Service
Bellevue Hospital
New York 16, N. Y.



Source and Cost

Manufacturer:
Everest and Jennings
761 No. Highland Avenue
Los Angeles 38, California

Distributor:
Your local hospital supply service or any distributor of Everest and Jennings wheel chairs

For Universal Chair only.

On Standard Universal Model	27.00
On chair with detachable arms	31.00

Description

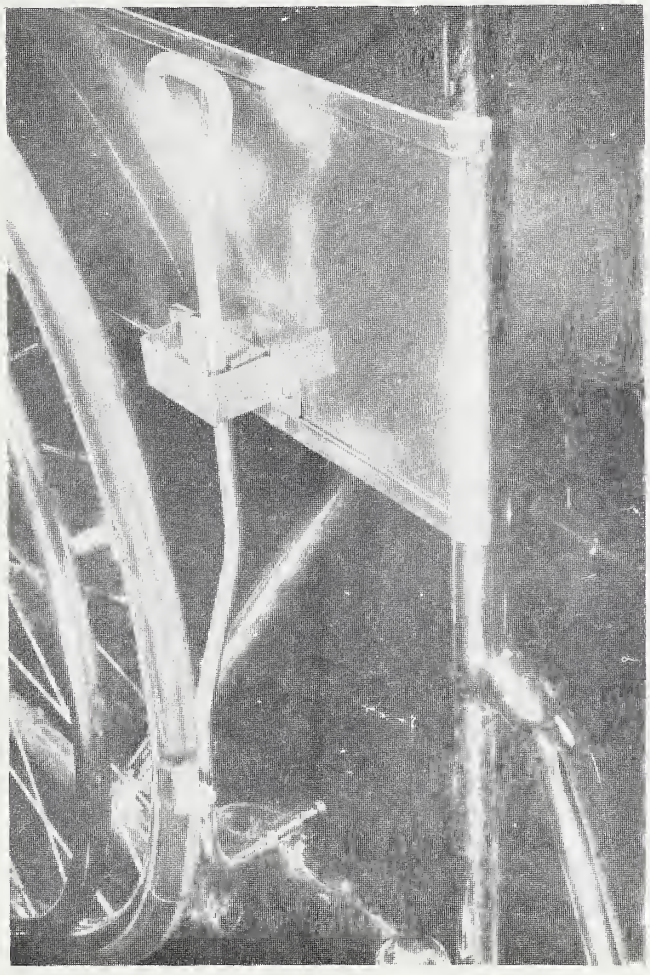
This foot rest is attached to the chair in such a manner that it can be swung to the side and flattened against the chair, back of the front wheels. When in desired position, the foot rest is held secure by a pin lock, - the pin attached by a small chain.

Purpose and Use

With foot rest out of the way, the seat of the wheel chair can be brought into contact with the seat of a straight chair, to which patient can slide. It is also convenient for use in home elevators or where space is limited.

BRAKES FOR WHEEL CHAIR

Submitted by: Crile Veterans Administration Hospital
Cleveland, Ohio



Source and Cost

Made by Manual Arts Therapy Service at Crile Veterans Administration Hospital in Cleveland, Ohio.

Description

The principal unit of each brake is a 5/16 inch steel rod bent as shown and fitting into the brake shaft fixture located on both left and right lower rung. A metal braking plate (approximately $1\frac{1}{2}$" x 1" x 1/8" thick), shaped to the general contour of the wheel, is brazed or welded to the 5/16" steel rod. A sheet metal retaining fixture is fastened to each side of the wheel chair by means of sheet metal screws. The wooden locking block is fitted inside each retaining fixture and fastened to the side of the chair. The fastening is accomplished by using round headed wood screws running through holes drilled in the metal side and tightening into the locking block.
A similar brake is attached to the opposite side of the chair.

Purpose and Use

Nearly all wheel chair users, whether temporary or permanent, find the need of brake attachments to their chairs for the purpose of stabilization, especially when getting into or out of the chair. Brakes are valuable, too, for persons whose upper extremities are too weak to control the wheels of their chairs up and down an incline.

At the Crile Veterans Administration Hospital in Cleveland the brake described has been found not only helpful to wheel chair users, but an easily made device that provides a good activity for patients assigned to manual arts therapy.

HAND BRAKES

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Manufacturer:
Everest and Jennings
761 N. Highland Avenue
Los Angeles 38, California

Distributor:
Your local hospital supply service or any
distributor of Everest and Jennings wheel chairs 12.50

Description

These are lock brakes, used to hold wheel chair stationary. They cannot be used as retarding brakes. The handle of this type of brake can be extended, when desired, in the manner shown in the photograph illustrating the rubber hand grips. Such an extension may be necessary when the patient's reach is limited, as is true in many cases of arthritis especially.

Purpose and Use

The brakes prevent the wheel chair from rolling when the user is getting in and out, thus adding very much to his or her safety. They are also important if the wheel chair is ever left alone on the sidewalk.

AIRFOAM CUSHIONS

SKIRT GUARDS FOR WHEEL CHAIR

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Everest and Jennings (manufacturer)
761 N. Highland Ave., Los Angeles 38, Calif.

Your local hospital supply service or any
distributor of Everest and Jennings wheel chairs

Airfoam cushion - only one model is carried in stock - 2" x 18" x 16"	7.50
Extra covers, each	1.25
Uncovered cushion	6.50
Other sizes to order, covered and uncovered	4.50 - 22.75

Skirt guards are standard equipment on Universal and Traveler Models. When added to wheel chair as extra, they are 5.00

Description

Airfoam cushions, made of foam rubber, are covered in a good quality of removable gray fabric. The foam rubber carries the body weight on all portions, since the interconnecting air cells of which it is composed give much the effect of an air cushion, but with less sudden undulation and a greater softness. The foam rubber also gives greater coolness and helps prevent dampness from absorption of perspiration.

Skirt guards consist of two light, strong stainless steel panels, one on either side of wheel chair seat, finished to harmonize with chair. The skirt guards do not change the over-all width of the chair.

Purpose and Use

An Airfoam cushion in a wheel chair provides comfort and aids in the prevention of pressure sores. This feature, and the ease with which both cushion and cover can be washed, make the Airfoam cushion particularly desirable for paraplegics.

Skirt guards are a precautionary measure intended for persons who regularly use their wheel chairs out of doors.

BRIDGEBOARD

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Everest and Jennings (manufacturer)
761 N. Highland Avenue
Los Angeles 38, California

Your local hospital supply service or any distributor
of Everest and Jennings wheel chairs 7.50

Description

The bridgeboard is made of polished hardwood 36" x 8" and one inch thick, plain or covered with leatherette. The top surface slopes at either end.

Purpose and Use

The bridgeboard is useful in transferring persons who are unable to get in and out of beds, automobiles, etc., by themselves. If the patient is completely helpless, one attendant can slide him easily on a rug or blanket placed on bridgeboard.

FOOT BLOCKS FOR WHEEL CHAIR

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

The foot blocks in the illustration were made by a friend of the patient.

Description

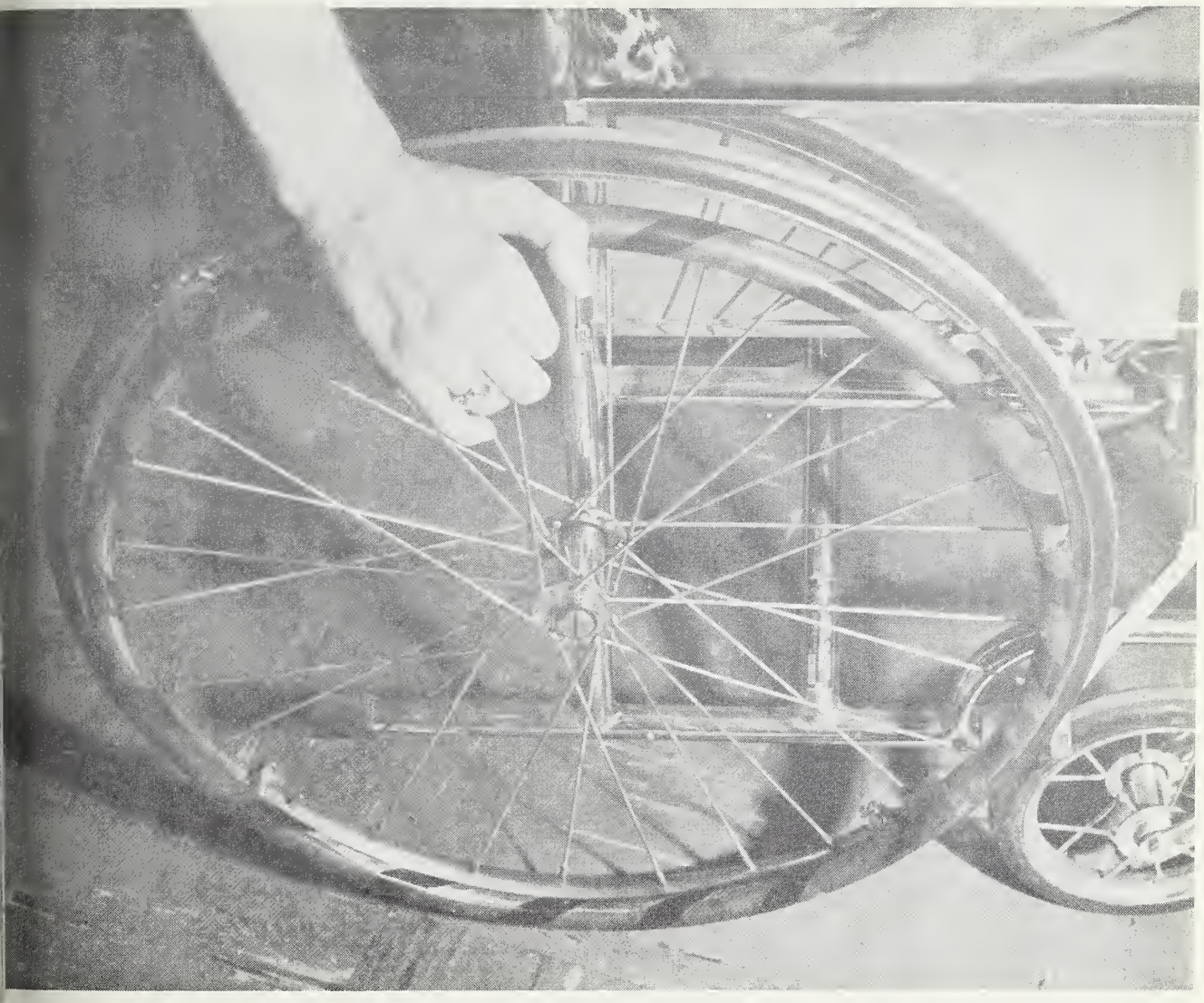
The foot blocks are made of hollow aluminum or other light metal, or of wood. They are fastened by screws to the foot blocks of the wheel chair.

Purpose and Use

These foot blocks are an inexpensive way of adjusting a wheel chair to fit a patient whose legs are not long enough to reach the foot rests, as is often the case when a second-hand chair must be used. If one of the patient's legs is shorter than the other, blocks can be made accordingly.

RUBBER COVERED HAND RIM

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Devised in the Workshop.

Cost of materials approximately 1.25

Description

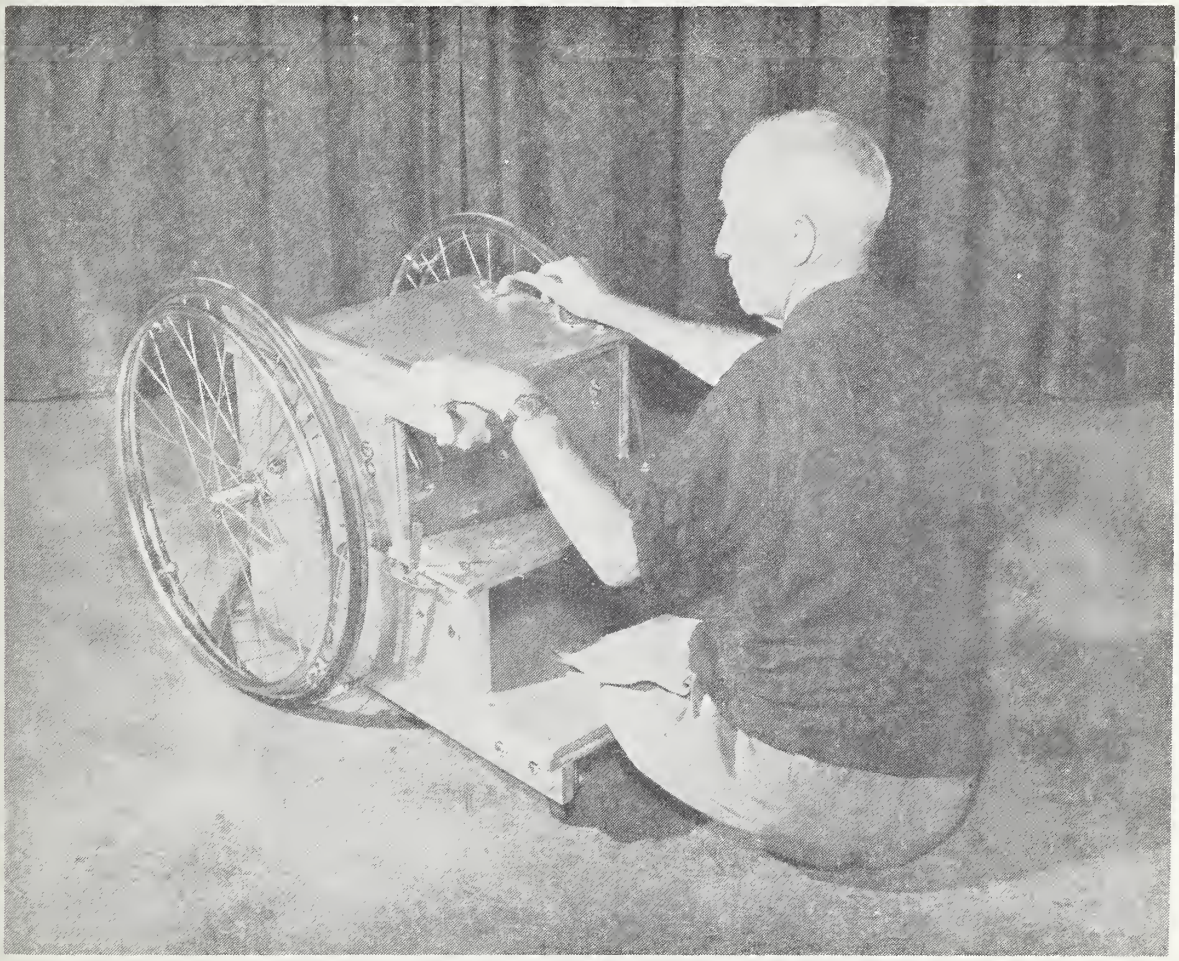
A piece of 3/8" or 1/2" gum rubber tubing is split open bound to the hand rim of the wheel chair on either side by means of scotch electrician's tape.

Purpose and Use

This is a simple and inexpensive means of providing extra purchase on the hand rims for weak hands and so making it less difficult for patient to propel wheel chair.

AUXILIARY WHEEL CHAIR

Submitted by: J. O. White
22 Hawthorne Place
Malverne, Long Island, N. Y.



Source and Cost

Made and sold by:
J. O. White
22 Hawthorne Place
Malverne, Long Island, N. Y.

Price: about $50.00

Description

The auxiliary wheel chair, intended for use at home, consists of a seat, without back or arms but having standard wheel chair wheels and attached steps. One side of the seat has a long wooden handle which extends beyond the edge of the seat in the front; at the other side of the seat there is a pressed steel handle of the shed door type. The chair is made of 5/8-inch plywood and is fitted with a brake and finished with aluminum paint.

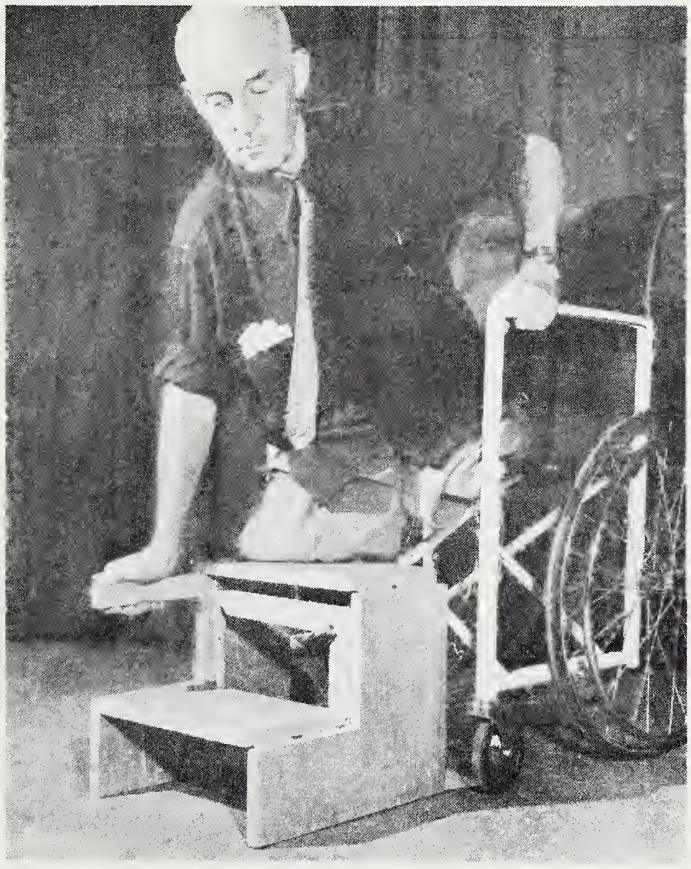
Purpose and Use

The auxiliary wheel chair was designed by Mr. White - himself a bilateral A-K amputee - to give wheel chair patients greater independence. The chair takes up appreciably less space than the regular wheel chair and permits the patient to move between chair and bed, bath or toilet with minimum difficulty.

FOLDING STEPS FOR AMPUTEES

LIGHT-WEIGHT WHEEL CHAIR

Submitted by: J. O. White
22 Hawthorne Place
Malverne, Long Island, N. Y.



Source and Cost

Made and sold by:
J. O. White
22 Hawthorne Place
Malverne, Long Island, N. Y.

Prices:	Folding steps	about	$10.00
	Wheel chair (without accessories)	about	50.00
	Lock-on tray for wheel chair		2.50

Description

The folding steps are made of 5/8-inch plywood, finished with aluminum paint. When folded, they are easily stored.

The wheel chair is made of light-weight metal tubing, finished in white enamel, with sling-type leather seat and back. It can be folded.

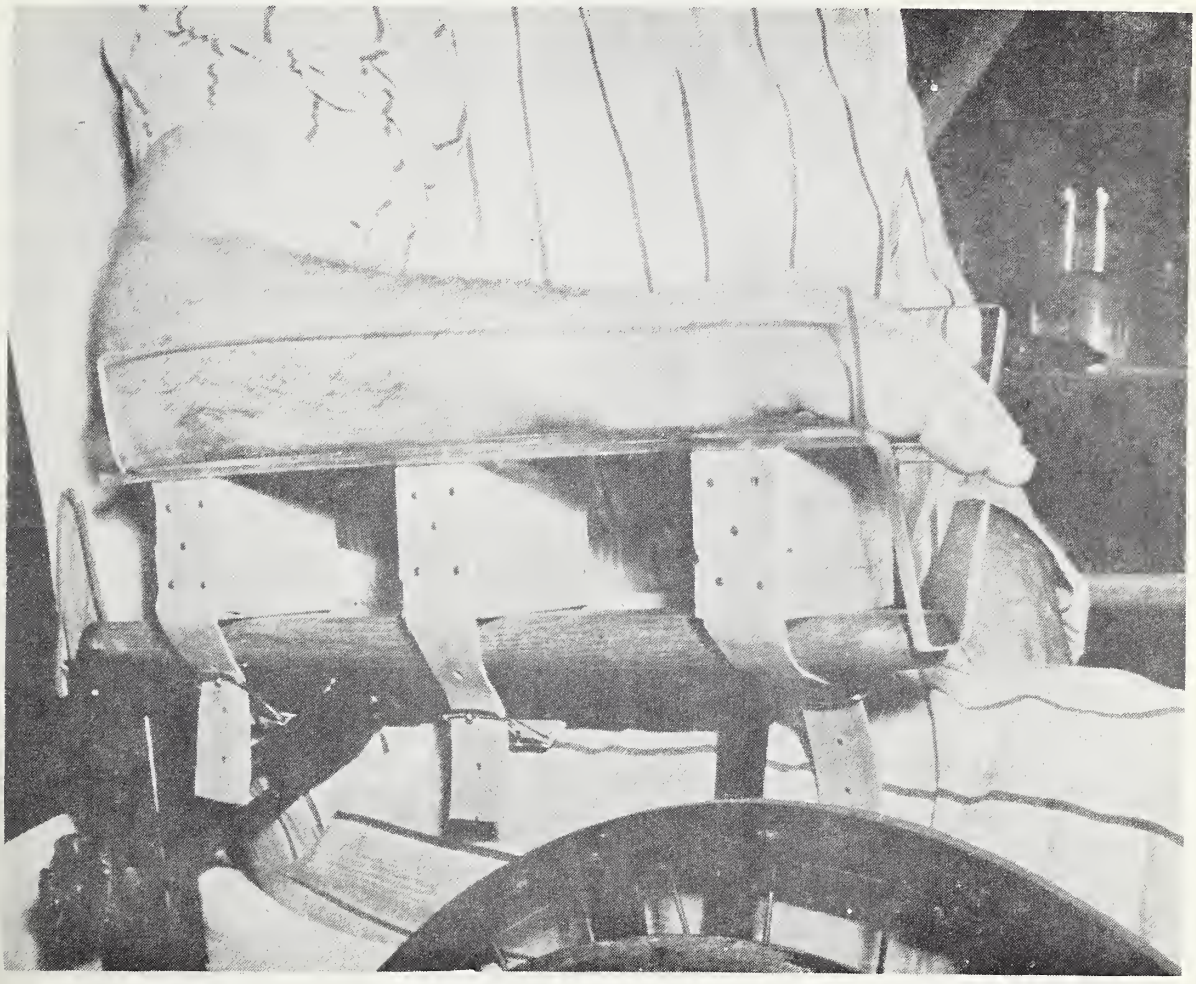
Purpose and Use

The steps were designed to enable bilateral amputees to get in and out of the wheel chair, or for use in the bathtub.

The wheel chair is light in weight, made to specification, and sold at a minimum cost. It can be fitted with brakes, foot rest, and other accessories.

WHEEL CHAIR ARM TROUGH

Submitted by: Physical Medicine Rehabilitation Service
Veterans Administration Center
Bath, N. Y.



Source and Cost

Made in workshop from materials costing about $2.50.

Description

This device is fashioned of Plexiglas, wooden blocks (if necessary), scrap leather, nails, buckles, and a towel to be placed in the bottom of the trough under the arm. Light metal or wood might be used in place of Plexiglas, and other means of fastening the trough to the chair are feasible. The trough can be made without the blocks if there is no need to raise the arm to relieve shoulder strain. There also may be changes made in the direction of the long axis.

Purpose and Use

The purpose of the device is to support a weakened or paralyzed arm by supporting the deltoid muscles. It can be used in place of a sling when the patient is seated. The trough aids in maintaining good posture habits when one arm is paralyzed, helps avoid finger flexion deformities following cerebral vascular accidents, and prevents a paralyzed arm from falling into wheel chair wheels.

ARM REST FOR HEMIPLEGICS

Submitted by: Physical Medicine and Rehabilitation Service
Bellevue Hospital
New York 16, N. Y.

Source and Cost

Made in Occupational Therapy Workshop.

Description

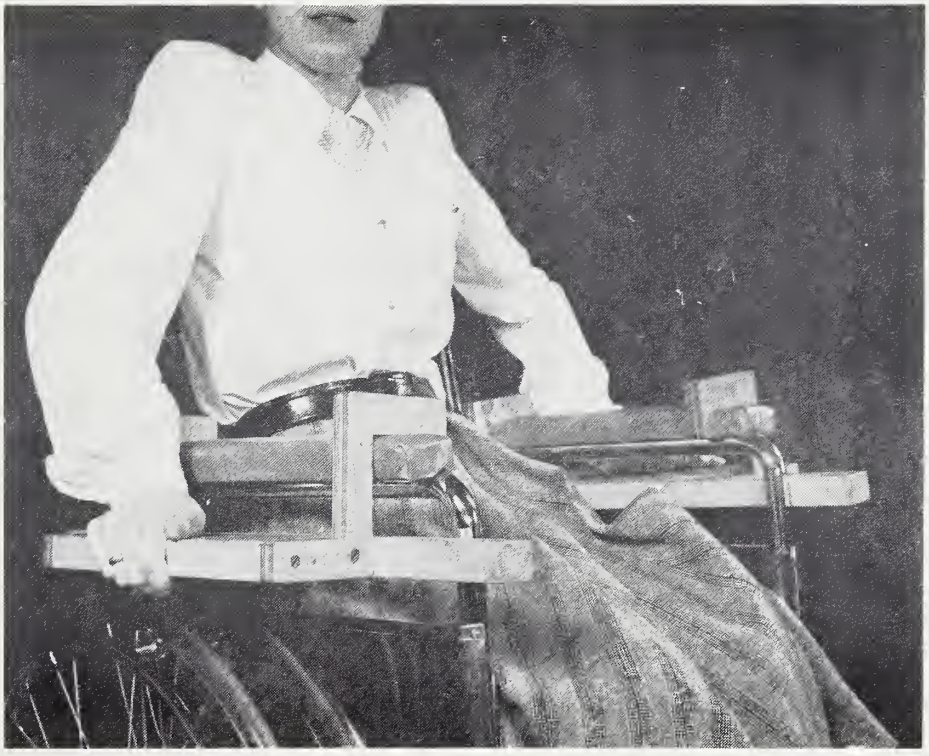
A built-up wooden arm rest, attached to the chair arm with bolts, supports a flat top for the patient's arm. The top piece is attached only at the rear end, by means of a bolt and butterfly nut, which permits it to swivel. The front end of the arm board is hinged to adjust to some finger flexion. The whole is lightly padded and covered with leatherette or oilcloth.

Purpose and Use

The purpose of the arm rest is to support in good position the arm on the patient's affected side. Swivel action - permitted by bolt and butterfly nut - allows arm to be brought around towards patient's body.

PUSH UP ATTACHMENTS FOR WHEEL CHAIR

Submitted by: Physical Medicine and Rehabilitation Service
Bellevue Hospital
New York 16, N. Y.



Source and Cost

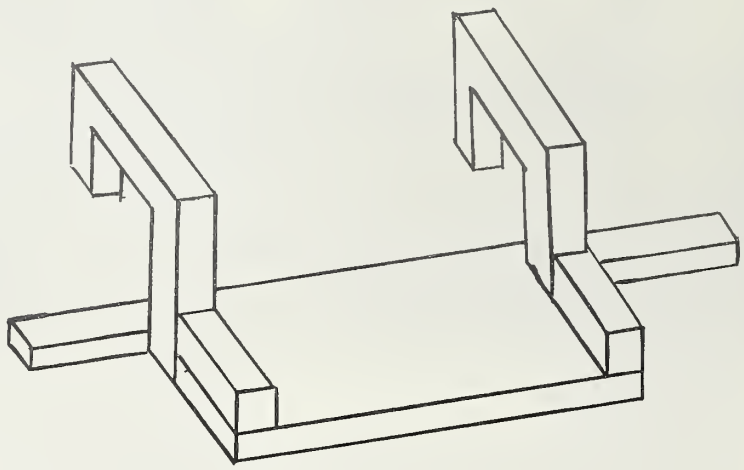
Made in the shop.

Description

The push-up attachments are two wooden shelves, made to hook firmly over wooden or upholstered armrests of wheel chair, one on either side, as many inches as desired below armrests.

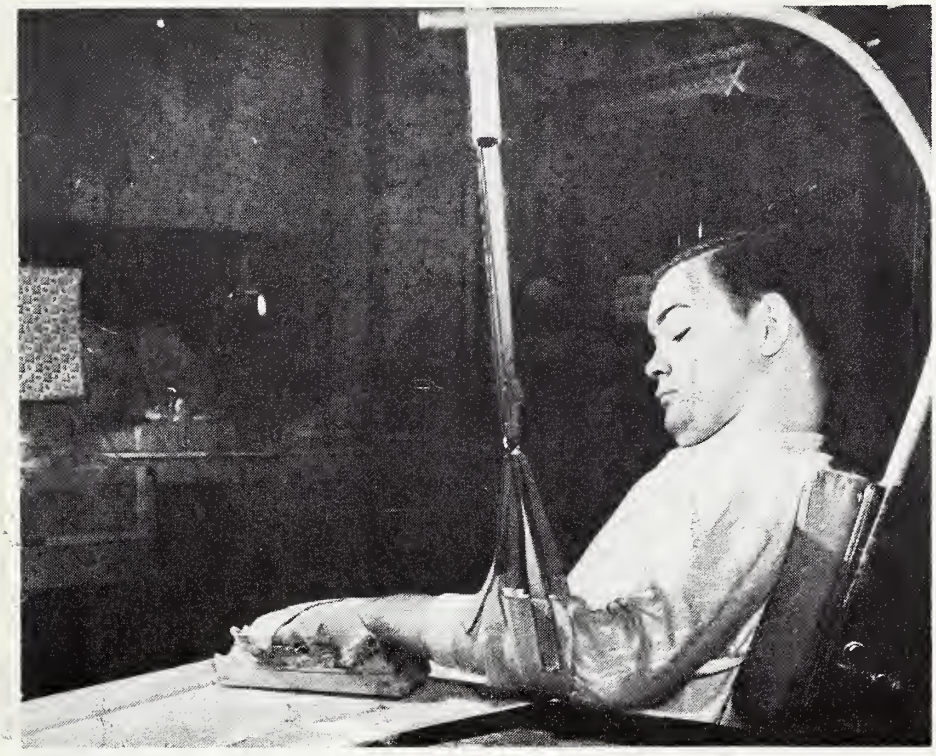
Purpose and Use

Placing his hands on these attachments (shelves), a patient too weak to raise himself from height of wheel chair arms can start push-up exercises. With this beginning, he eventually may so strengthen his upper extremities that he is able to rise from the wheel chair by means of the regular armrests.



SUSPENSION SLING

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Made in the workshop at a cost for materials of approximately $2.50

(The sling shown on Demonstration Chair, made by Everest and Jennings, is priced at $10.00.)

Description

The device is an arm sling made of canvas, leather, or other suitable material, suspended from a metal rod by means of elastic webbing tape. The rod is made from a piece of pipe or aluminum tubing, bent to shape and attached to wheel chair by insertion in metal tubing which forms the back upright, or by bolting to same tubing, as shown in illustration. It is sometimes desirable to suspend the sling from the rod with a light-tension coil spring, or with tubber tubing.

Purpose and Use

The purpose of the sling is to suspend or support a flail or a weak arm in a suitable position, eliminating gravity, to assist patient in typing or working. The spring or the rubber tubing, which supports the sling, gives more comfort and also acts as a springboard to initiate muscle response.

EXTRA WHEELS TO GUARD AGAINST TIPPING OF WHEEL CHAIR

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made for a patient by a friend, at small cost for materials.

Description

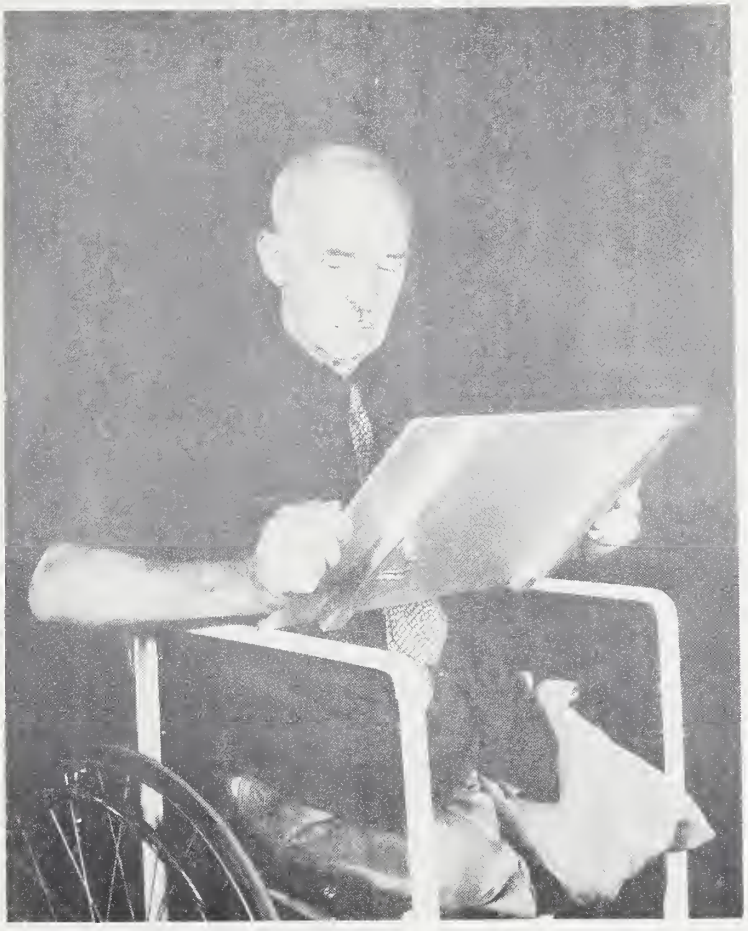
By the use of elbow joints, an extra small wheel is added to either side of the wheel chair at the back of the lower horizontal bars of the frame.

Purpose and Use

These extra wheels prevent tipping of the wheel chair and serve to reassure a patient who, for any reason, may be in fear of falling backwards, especially when chair is tilted in going up or down curb.

WHEEL CHAIR TRAY

Submitted by: Mr. J. O. White
Malverne, Long Island, N. Y.



Source and Cost

J. O. White (maker and distributor)
22 Hawthorne Place
Malverne, Long Island, N. Y. 2.75

A wheel chair tray is made by Everest and Jennings, too, and is distributed also by any hospital supply service that is an authorized Everest and Jennings dealer. The price of the Everest and Jennings tray is 4.50

Specially designed trays are made to specification by Everest and Jennings.

Description

This tray is composed of a single sheet of ½-inch plywood, or any soft, light wood, with smoothed edges and rounded corners. It is re-enforced by two 2" x 2" strips of wood riveted to the under side of tray at the proper distance apart to fit against the chair arms and so hold the tray securely. An open-end door handle on one of these strips prevents tray from sliding forward. The tray is stained and varnished or finished with aluminum paint.

Purpose and Use

The wheel chair tray can be used for reading, writing, eating, and playing games, or for hand work. It is a great convenience for almost any wheel chair user.

WHEEL CHAIR WORK TRAY

Submitted by: Adjustics, Inc.
428 East 67th Street
New York 21, N. Y.

Source and Cost

Adjustics, Inc. (maker and distributor)
428 East 67th Street
New York 21, N. Y.

Basic tray — Price: 15.00 F.O.B. New York

Accessories are extra

Description

This strong wooden tray hooks onto the metal arms of a wheel chair in such a way that it is absolutely firm and cannot wobble. Its work surface is lower than the usual type tray which fits over the top of the arms. The inside dimensions are 14 " x 14".

The rack attachment can be adjusted for height and for distance from user, or it may be removed entirely. It can also serve as a second tray above main tray. Not shown are the many accessories - such as small weaving looms, embroidery frames, cord knotting frames - that can be attached to the rack.

Purpose and Use

The tray is intended primarily for use as a work table and will support a typewriter or calculating machine, but it can be used for reading, writing, cards and other games. It is a convenient table for wood carving, jewelry and watch repair and similar trades or hobbies, and for household tasks such as polishing silver, preparing vegetables, etc.

TYPING TABLE FOR WHEEL CHAIR

Submitted by: Physical Medicine Rehabilitation Service
Veterans Administration Hospital
Richmond 19, Virginia

Source and Cost

Made at
Veterans Administration Hospital
Richmond 19, Virginia

Labor time about 1-½ hours. Cost approximately $2.00.

Description

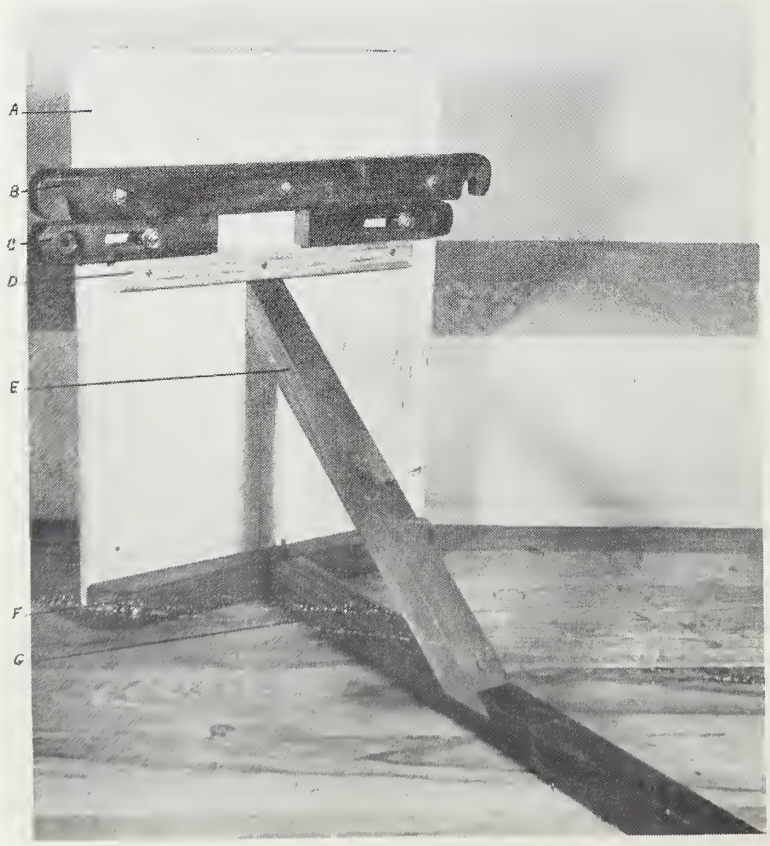
This little table is constructed of the following materials:

a) Top - $\frac{1}{2}$" plywood, 15" wide x 22" deep
b) Notched bar - 7/8" lumber, 2" wide with length to fit wheel chair
c) Sliding pieces - 3/4" lumber, $1\frac{1}{4}$" wide x 7" long
d) Brace - $\frac{1}{2}$" lumber, 1" wide x 13" long
e) Brace - $1\frac{1}{2}$" x $1\frac{1}{2}$" lumber
f) Leg - $1\frac{1}{2}$" x $1\frac{1}{2}$" lumber, 26-5/8" long, or length necessary to reach floor and provide flat table surface

Flat head bolts are used in the construction, and the bolts used to hold the slide bars (c) in position are fitted with washers, while the threads of the bolts are protected with a piece of tubing that slides over it like a collar. The tubing also prevents the threads from cutting into the wood and lets the bars slide more freely.

Purpose and Use

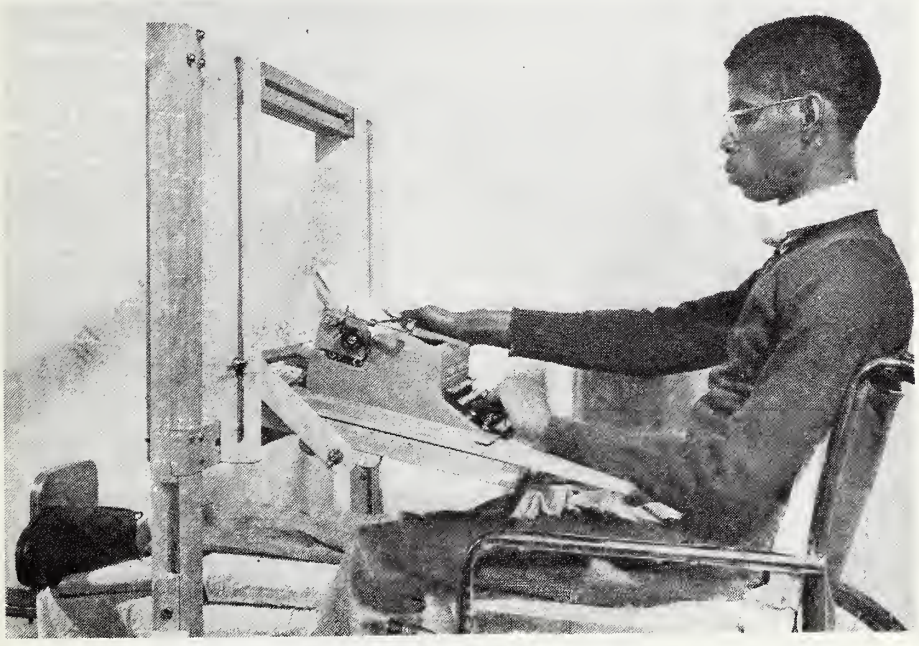
This table provides the patient confined to a wheel chair with a typewriter table at correct height and proper distance. Its advantage over conventional typewriter table is that it permits better posture and is therefore less tiring.



THERAPY FRAME

(for Typewriter and Other Purposes)

Submitted by: Adjustics, Inc.
428 East 67th Street
New York 21, N. Y.



Source and Cost

Adjustics, Inc. (maker and distributor)
428 East 67th Street
New York 21, N. Y.

Price with attachments approximately $50.00 F.O.B.

Description

This easel-type wooden frame is fitted together by means of bolts and butterfly nuts and can be fixed at any desired angle. When taken apart for packing, the separate pieces fit together to make a perfectly compact bundle for storage.

Purpose and Use

The frame will hold a typewriter firmly in a way that can be adjusted to the exact need of a wheel chair patient, making it uniquely suitable for a person confined to some unusual position.

Not shown: The frame can be adjusted to accommodate persons in casts, and bed patients in many positions. It is used for a number of purposes, which will be shown in a later report.

READING RACK

for Wheel Chair Tray

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made in Occupational Therapy Shop.

Description

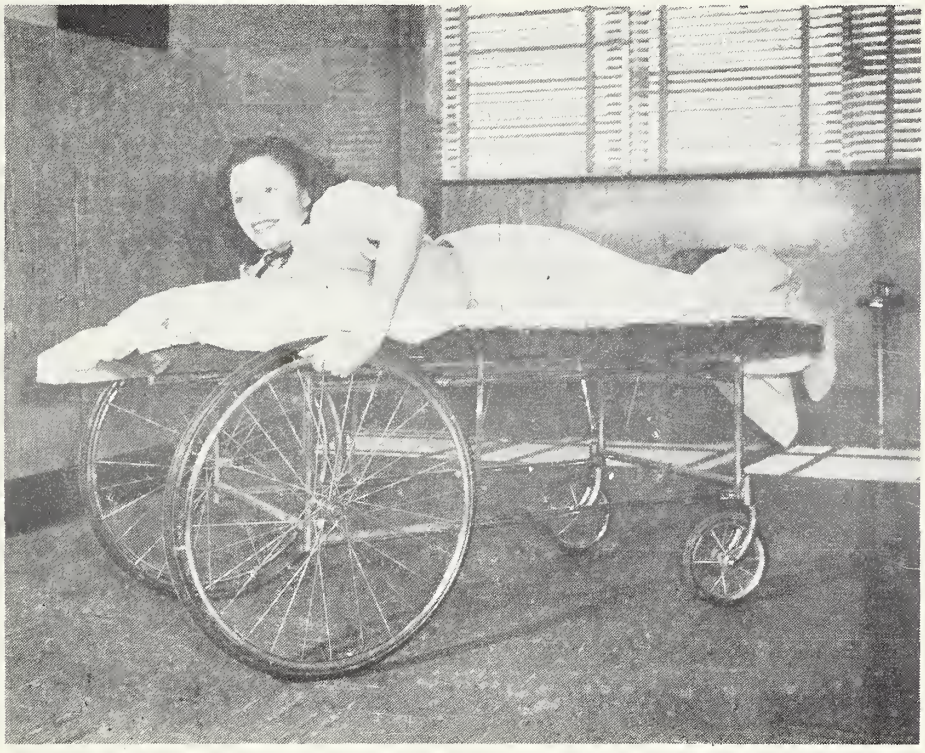
A wooden board, approximately 24" x 15", is inclined at an angle of about 30 degrees by means of three triangular wedges on the back. A strip of wood along the lower edge of the board serves as a rest for book or magazine.

Purpose and Use

The reading rack is designed to hold reading matter securely and at a proper angle so that a wheel chair patient can enjoy it with a minimum of effort. While anyone who uses a wheel chair probably would find the rack restful, it is particularly helpful to those having a weak arm or arms, such as hemiplegics, quadriplegics, and persons whose arms have been affected by poliomyelitis.

LOW HAND-PROPELLED STRETCHER

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Manufacturer:
Gendrom Wheel Company

Distributor:
Colson Corporation
Elyria, Ohio

Price approximately $150.00

Description

This stretcher, 72" long and 26" wide, is padded with foam rubber and upholstered in leatherette. It is 33½" high, on wheel chair wheels with 1" tires. The 24" wheels are equipped with handrims for self-propelling and with brake, and the 10" wheels with an adjustable locking device to limit movement (as desired) to forward and backward motion only.

Purpose and Use

This stretcher makes it possible for a patient who must remain in prone position (because of decubitus ulcers or other reason) to propel himself to and from classroom or workshop and thus lose no time from participation in rehabilitation program. Since the stretcher is of bed height, the patient can transfer himself without assistance.

c.1

SELF-HELP DEVICES

FOR

REHABILITATION

5

A co-operative service project
made possible by

THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

and conducted by the

NEW YORK UNIVERSITY • BELLEVUE MEDICAL CENTER

TITUTE OF PHYSICAL MEDICINE AND REHABILITATION

400 EAST 34TH STREET, NEW YORK 16, N. Y.

HV 3011
I

Booklet No. 5 presents a number of articles of a general nature, including some special clothing. This manual precedes the promised report on bathroom aids and equipment, which is still in process but postponed pending more complete information.

L V 311
I
cop. 1

DEVICE FOR PUTTING ON STOCKINGS

Submitted by: Rehabilitation Services, Inc.
200 Court Street
Binghamton, N. Y.

Source and Cost

Made by a local manufacturer in Binghamton, N. Y.

To be purchased from:
Rehabilitation Services, Inc.
200 Court Street
Binghamton, N. Y.

Price - F.O.B. Binghamton, N. Y. approximately 5.00 - 6.00

Description

This device consists of a 2½-foot wooden handle to which is attached a "U" shaped spreader. This spreader is made of polished wire, and there are two curved loops on each end of the spreader to hold a rolled stocking. The stocking, unrolling under proper tension, is then drawn over the foot and leg.

Purpose and Use

The device makes it possible for a woman to put on her own stockings even though she is unable to bend or stoop. It is intended primarily for arthritics.

PROTECTIVE PANTS FOR INCONTINENT PATIENTS
and other
Special Clothing for the Physically Handicapped

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Designed by Miss Julia Silverman in co-operation with the staff of the Institute of Physical Medicine and Rehabilitation.

Made and sold by:
Miss Julia Silverman
201 West 89th Street
New York 24, N. Y.

Water-proof pants in Horcolite coated nylon	10.00
Cotton underpants for children	1.50
Special outer shorts in cotton twill	10.00
Special slacks in cotton twill	15.00
Special slacks in wool flannel	25.00

Made to order - write for details.

Description

The "Dia-Pro" (patent pending) pants are made of a washable Horcolite coated nylon, with 3/4" elastic bands at legs and 2" elastic band at waist, where elastic material is extended downward in a front insert equipped with five hook-and-eye fasteners. The triangular front opening, which is closed by nylon slide fasteners or snaps, is designed for the convenience of persons wearing long leg braces or needing access for changing pads without removing garment. A 2" insert of thin nylon just below the waist band minimizes any overheating effect of the air-tight material.

(Other models - with wider band of elasticized material at waist - have been tried for persons wanting some abdominal support also, but these have not yet been given sufficient trial to establish their value. Yet other models, not tested at the Institute, are available for colostomy cases or for menstruation protection.)

Other "Dia-Pro" pants of nylon or rayon jersey with elastic only across the back and the triangular opening fastened by snaps, are made for persons wearing long leg braces but not in need of the water-proof feature. For children, "Dia-Pro" pants are made of cotton jersey, with front piece held up by two bone buttons.

The "Dia-Pro" principle is used also for outer shorts for children wearing long leg braces.

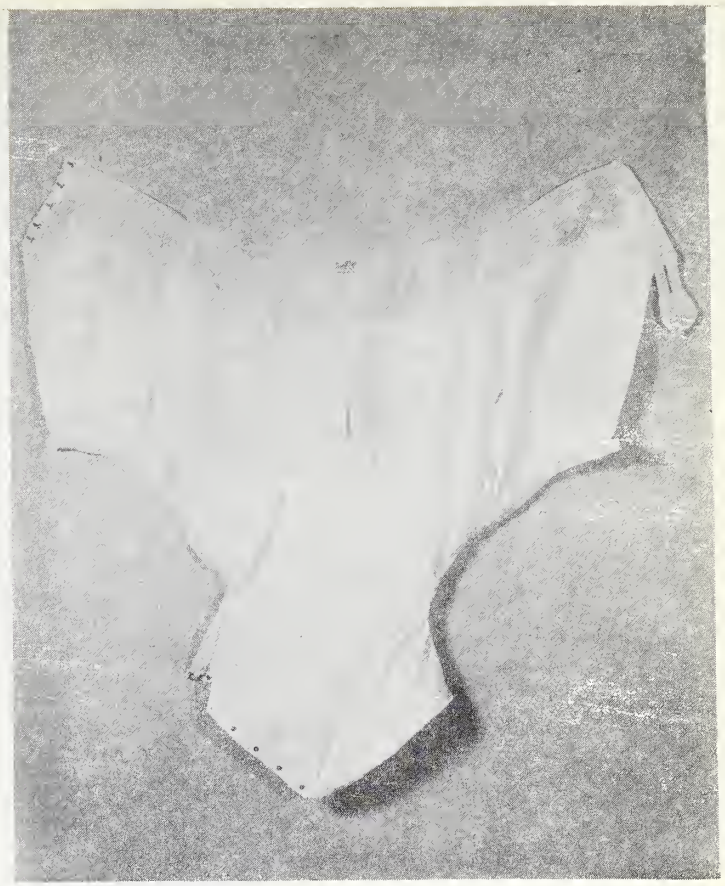
"Dia-Pro" outer shorts and slacks for older girls and women are made with slide fasteners the full length of leg at either side so that garment can be opened completely for convenience. A narrow belt under the front piece remains in place and keeps the garment up about the waist at all times, even when it is opened for use of toilet, change of padding in underpants, or adjustment of braces. The opening flap may be in the front or in the back.

Purpose and Use

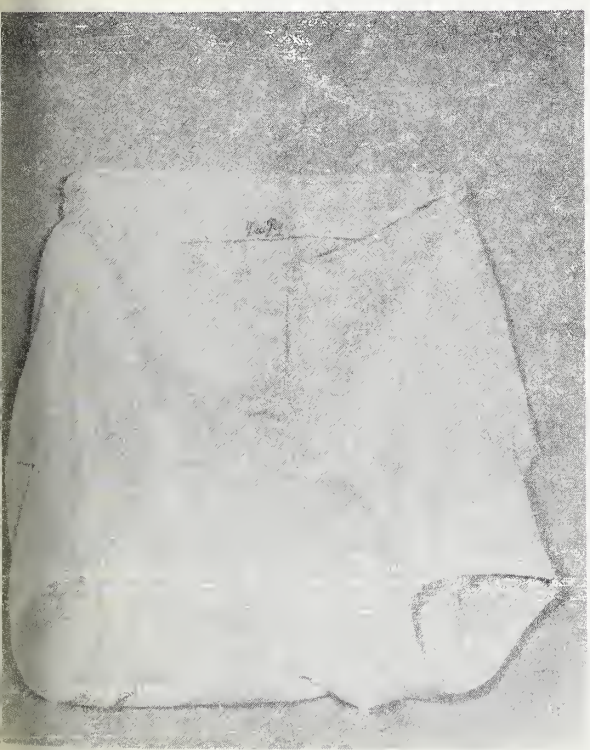
The "Dia-Pro" underpants were especially designed to be worn under long leg braces and can be opened and closed without removing braces. The water-proof style for paraplegics, or others, with incomplete control of the bladder provides adequate protection since there is ample room for padding.

Women wearing long leg braces like slacks because they cover the braces and because they are convenient for exercising. "Dia-Pro" slacks are easily managed when it is necessary to change pads or to use the toilet, and the same is true of the outer shorts, if shorts are desired.

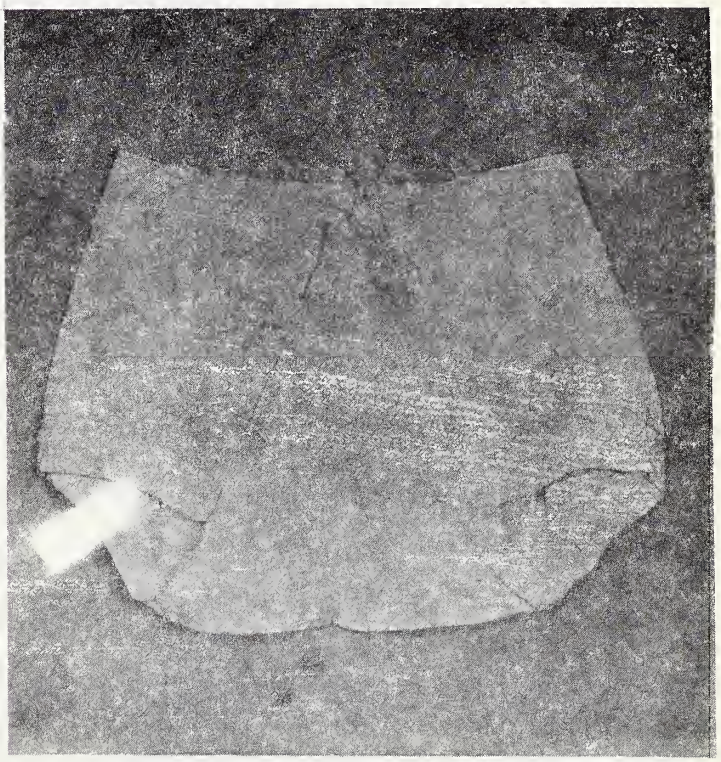
otective Pants - Showing Front Flap Open



Protective Pants - Fully Open



Model in Rayon Jersey



Model in Cotton Jersey

Children's Shorts

Small Children's Cotton Pants With Three-Button Fastening

Slacks To Be Worn Over Braces

Shorts To Be Worn Over Braces

ELASTIC CUFF LINK

Submitted by: Veterans Administration Center
Martinsburg, West Virginia

Source And Cost

Designed by Williám Barringer
Veterans Administration Center
Martinsburg, West Virginia

Cost negligible.

Description

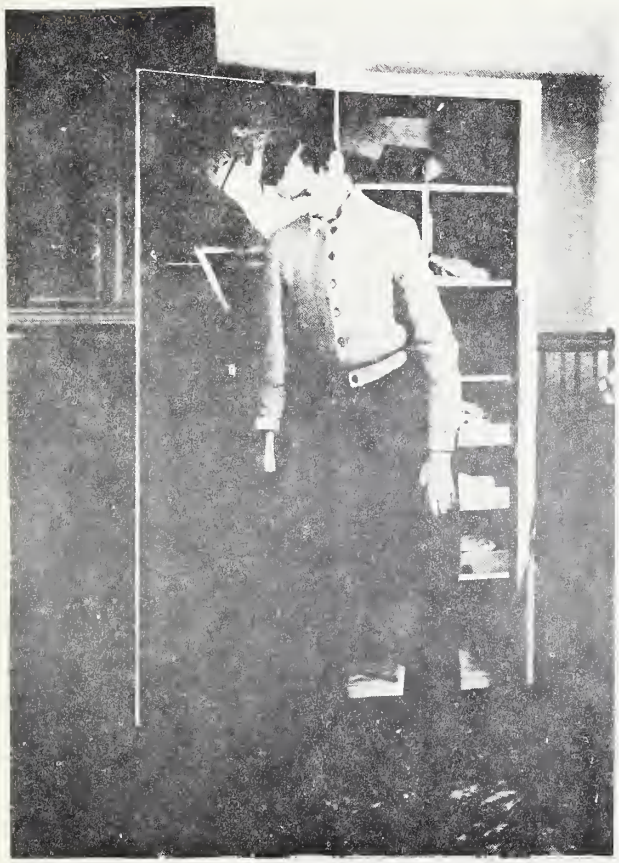
An extra button is sewn on opposite side of cuff and the two buttons are held together by a rubber band.

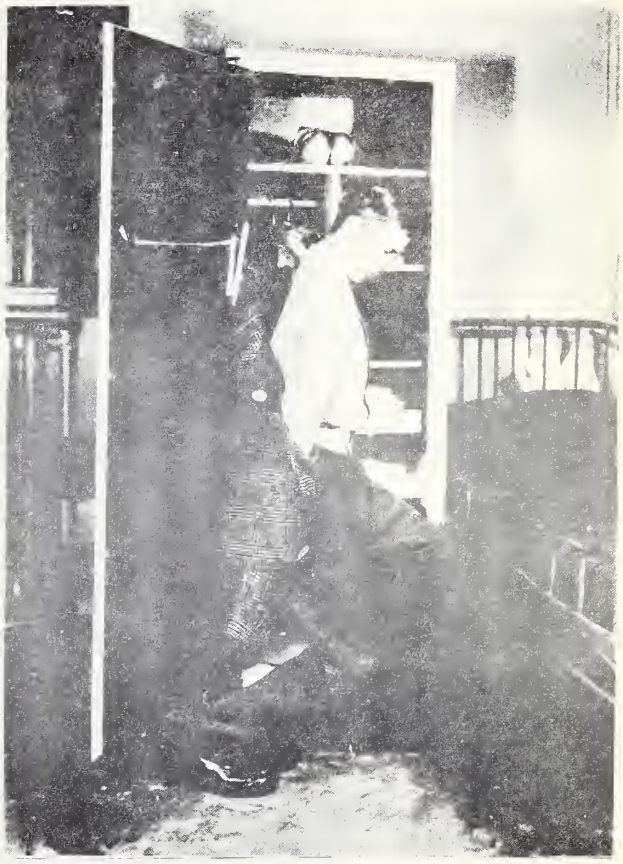
Purpose and Use

The elastic cuff link permits hand to slip through cuff without the cuff being unbuttoned first. By means of this device, a supply of shirts can be prepared in advance and the patient with hand too stiff or too weak to manage cuff buttons can still dress himself without assistance. This arrangement might be especially helpful to the hemiplegic or to one whose hands have been affected by arthritis.

CLOTHES HANGER

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden





Source and Cost

Manufactured by
Vanforeaustalten
Halsingborg, Sweden

Price about 10 crowns (2.00)

Description

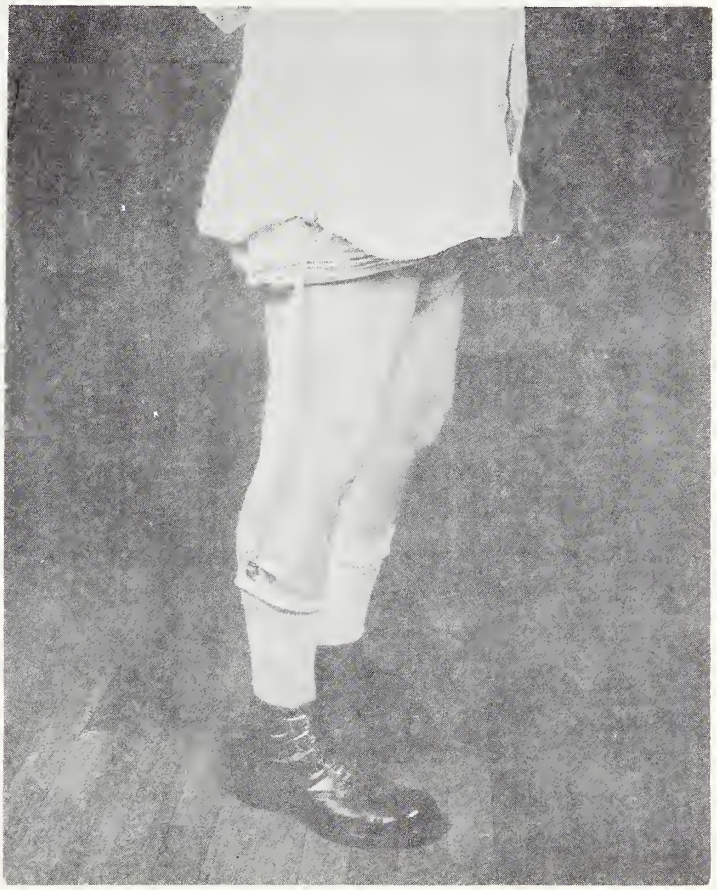
This jacket hanger is constructed as a frame of yellow stained wood. It is hung on a regular bracket by means of two wires and is placed at a suitable distance from the wall. The jacket is hung inside out, though sleeves are not turned. It is placed on two hooks attached to the frame and by means of two loops sewed under the collar. Sleeves should be well opened and facing the patient. The arms are put into the sleeves while knees are bent. The jacket will slide on as the shoulders are lifted. This requires some practice.

Purpose and Use

The jacket hanger makes jacket available for putting on unaided by a patient with stiff or paralyzed arms. It may prove of assistance to some arthritics or post-poliomyelitis patients, if they need this sort of help.

SHIRT HOLDER

Submitted by: Veterans Administration Center
Martinsburg, West Virginia



Source and Cost

Designed by William Barringer
Veterans Administration Center
Martinsburg, West Virginia

Description

Sharp toothed clips at either end of a length of elastic are fastened to hem of shirt and top of sock.

Purpose and Use

This device was designed for a hemiplegic patient to prevent the shirt from riding up during exercise.

ADAPTATION OF HIGH LACED SHOE

(for the hemiplegic)

Submitted by: Veterans Administration Center
Martinsburg, West Virginia

Source and Cost

Designed by William Barringer
and made at the Veterans Administration Center

Elastic for shoe laces can be purchased at almost any notion counter.

Description

Elastic shoe laces are used to lace shoe across the instep and top of shoe is supplied with two leather straps, fastened by buckles.

Purpose and Use

This adaptation makes it possible for the hemiplegic, or other patient deprived of the use of one hand, to continue to wear his high laced shoes and fasten them unaided even though no longer able to manage shoe laces. With the elastic shoe laces, he can step into the shoe while it remains laced; the straps can be buckled using only one hand.

STRAIGHT TOE SOCK
(for feet affected by polio)

Submitted by: Miss Josephine McCarthy
St. Charles Hospital
Port Jefferson, N. Y.

Source and Cost

Easily made by anyone who can handle a needle.

Description

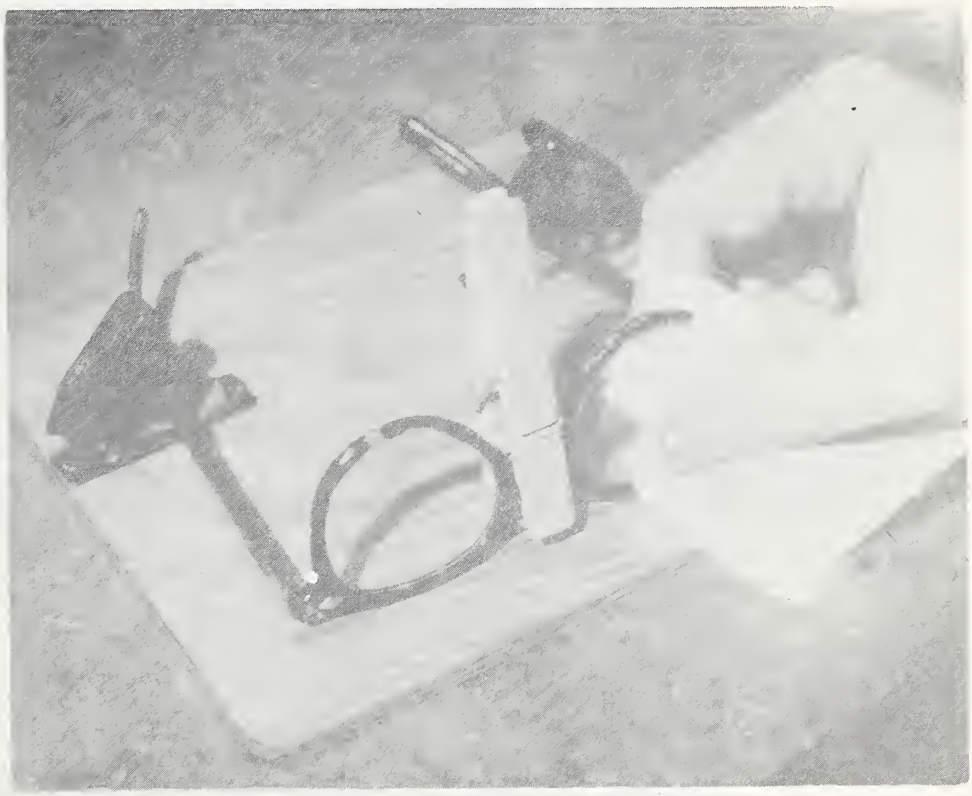
A small tab is sewed on the tip of an ordinary child's sock.

Purpose and Use

By holding tab when child's shoes are being put on it is possible to prevent the toes of a flail or a weak foot from curling. The sock is used in cases of foot disability following poliomyelitis.

EYEGLASS HOLDER

Submitted by: Ardis A. Gabel, OTR; aided by Margaret J. Knowlton, OTR
Occupational Therapy Department, GM&S Hospital
Veterans Administration Center
Los Angeles 25, California



Source and Cost

Made in the Occupational Therapy Department, GM&S Hospital.

Description

This device consists of a 6" x 6" piece of plywood to which two electric shunt switches are attached. Two rubber washers are placed in the switches for protection of the bows of the glasses. One piece of wood (1/4" x 3/4") around which nose-piece fits is nailed to board" and a snapper type clothes pin is used to secure glasses at this point.

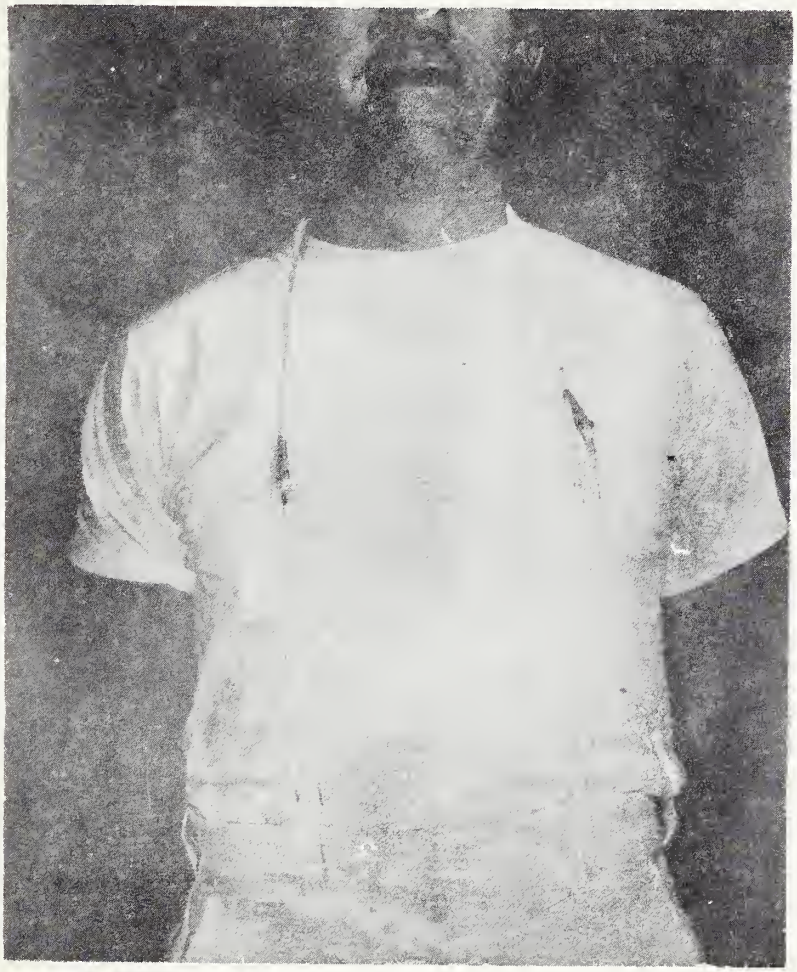
Purpose and Use

The holder enables persons with severely disabled upper extremities to polish their eyeglasses without danger of dropping or breaking. It may be of help in cases of amputation, arthritis, or residual poliomyelitis.

To use: The switches are opened. The glasses are placed so that the bridge or nose-piece is in front of, and next to, the small piece of wood placed perpendicular to the base. The clothes pin snaps nose-piece and small wooden piece together, stabilizing the glasses for cleaning. The switches are closed over the bows, and the cleaning process may begin.

E-Z REACH SUSPENDERS

Submitted by: Ardis A. Gabel, OTR
Occupational Therapy Section, GM&S Hospital
Veterans Administration Center
Los Angeles 25, California



Source and Cost

Bo-Ard Studio
12425 Brooklake Street
Venice, California Price 75 cents

Description

The suspenders are made of a single length (about 60 inches) of nylon parachute cord, to each end of which is fastened an alligator radio clamp. The cord is placed under the shirt collar with the ends run through the front belt-loops of trousers and doubled back and clamped to the cord on either side near the tip of the collar. This arrangement is neat and inconspicuous.

Purpose and Use

This device was designed to solve the self-care problem of lowering trousers without letting them drop to the floor when wearer finds difficulty in this matter due to arm amputation, partial paralysis, or other disability affecting his dexterity. When the wearer stands up - with suspenders still at full extension - the trousers are knee-high and within reach of being pulled up without danger of a struggle to retrieve them from the floor. The suspenders can be helpful to an amputee, a hemiplegic, or other unilaterally disabled person.

FOOT CONTROLLED NAIL CLIPPER

Submitted by: Margaret J. Knowlton, OTR and Ardis A. Gabel, OTR
Occupational Therapy Department, GM&S Hospital
Veterans Administration Center
Los Angeles 25, California

Source and Cost

Made in Occupational Therapy Department, GM&S Hospital, Veterans Administration Center, Los Angeles, California.

Nail clipper (purchased at manicure supply counter in variety store or pharmacy)	about	25 cents
Plywood and spring steel	about	35 cents

Description

This device is made from two pieces of plywood ($1\frac{1}{2}$" x 5" x $\frac{1}{4}$" and $1\frac{1}{2}$" x 3" x 3/8") which are nailed together. A piece of $1\frac{1}{2}$-inch spring steel is screwed on top to hold nail clippers. A piece of mesh wire, soldered to lever of nail clippers, descends through a hole drilled directly beneath same. Foot cuff is made from a 9" x 5" piece of leather, and a spring clamp is used to adjust to proper length.

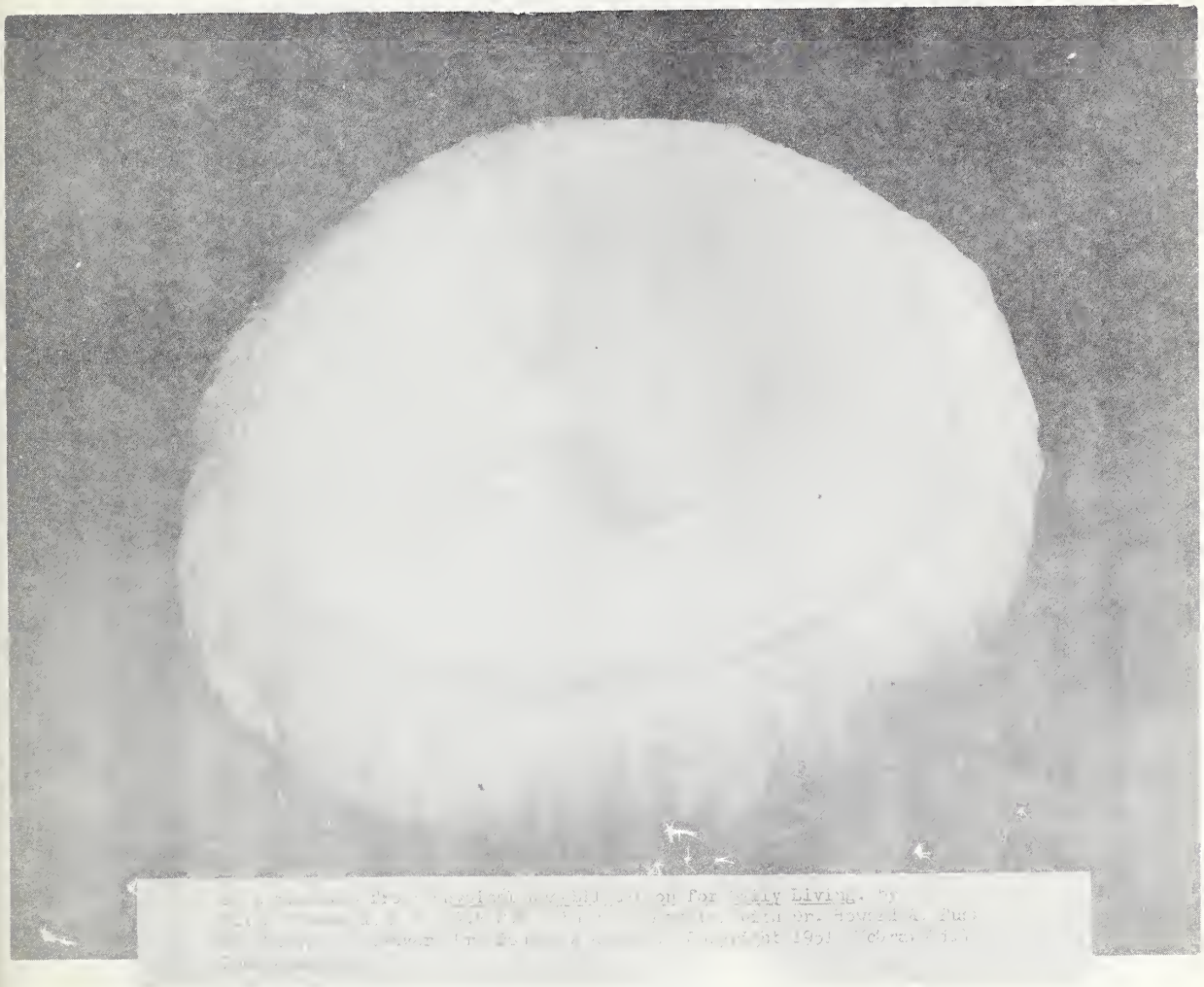
To use: The base of clipper is slipped into an open drawer which is then closed to hold device, or it may be clamped to a table; the foot is placed in the leather foot cuff; the spring clip is adjusted so that heel rests upon the floor; the clipper is opened and closed by the extension and flexion of the foot.

Purpose and Use

The device enables a patient to cut his finger nails without using his other hand. It may be an aid to self-care for amputees, hemiplegics, and persons with one hand affected by poliomyelitis.

SHOWER CAP NIGHT URINAL

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Made by the Nursing Division at the Institute of Physical Medicine and Rehabilitation.

Price of the shower cap		40 cents
Price of cellucotton filling	about	10 cents

Description

In order to keep the bed dry at night, male patients have found the following procedure helpful. The patient sleeps on his abdomen with a shower cap placed under his genitalia. The shower cap, which should be plastic, beret type and seamless, is prepared in the following manner:

Cellucotton 1 yard long and about ½ inch thick is rolled and tucked tightly inside the shower cap around its entire circumference, forming a doughnut. Thereby, the elevated edge will form a circle which will prevent overflow. In the hollow center a thin layer of cellucotton is placed and covered with a fine piece of gauze. This will prevent the cellucotton clinging to the skin of the penis, which is placed in the hollow center. Whenever necessary the wet cellucotton is discarded and replaced. The cap will be ready for use after being washed with soap and water.

Special Note: The gauze may cover the center only, or the entire cellucotton. In the latter case, care should be taken to avoid tightness of the gauze over the center, since taut gauze threads may cause irritation of the skin.

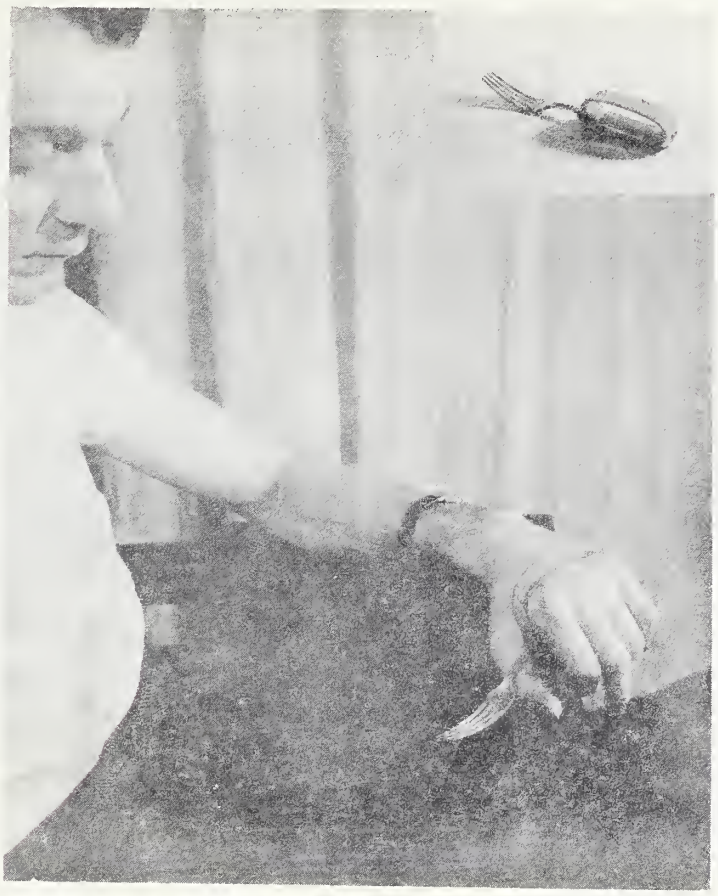
(Quoted from: Physical Rehabilitation for Daily Living, by Edith Buchwald, M.A., A.R.P.T., in collaboration with Dr. Howard A. Rusk, Dr. George G. Deaver, Dr. Donald A Covalt. McGraw-Hill, New York, 1951.)

Purpose and Use

This device may be used by any incontinent male patient as a means of keeping the bed dry at night or it may be used during the day if the patient is confined to the prone position on bed or stretcher. It has been especially helpful in cases of paraplegia and quadriplegia with incontinence.

LEATHER UTENSIL HOLDER

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Made in Device Workshop

Cost of materials approximately 25 cents

Description

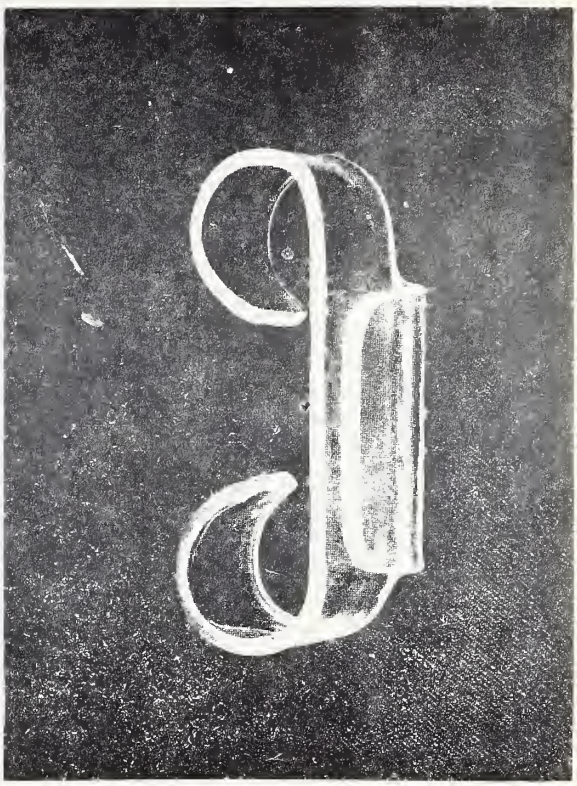
A cuff of elasticized webbing is made to fit over the metacarpals of the hand, attached to a leather strip on the palmar side, doubled and stitched to form a pocket. The opposite end of this pocket may be open or closed. Or there may be two pockets, one slightly smaller than the other.

Purpose and Use

The utensil holder is intended to hold spoon or fork, - rat-tailed comb, toothbrush, razor, etc. - and thus make use of these implements possible to a stiff or paralyzed hand. It may be used by a quadriplegia, poliomyelitis, or possibly an arthritis patient.

HOLDER FOR SPOON OR FORK

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden



Source and Cost

Manufactured by
Vanforeanstalten
Halsingborg, Sweden

Price about 5 crowns (2.00)

Description

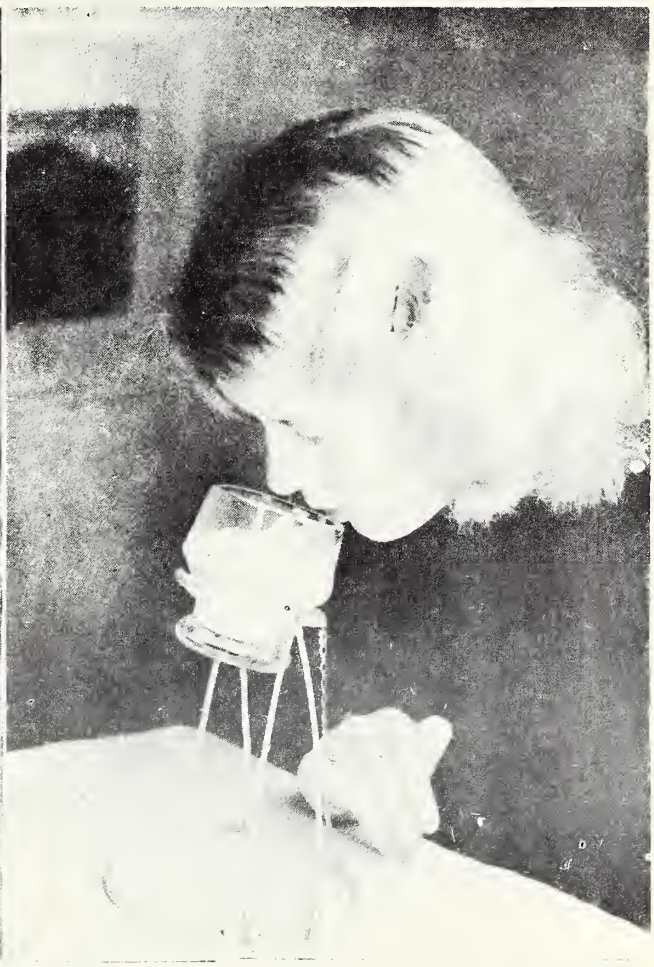
This holder from Sweden is a plastic cuff, made to fit around the individual's hand, with extra clip on palmar side to hold spoon or fork.

Purpose and Use

The holder makes self-feeding possible for patients with fingers too weak or too stiff to grasp an eating utensil. It may be helpful to those whose hands have been affected by arthritis, poliomyelitis or paralysis due to other causes.

HOLDER FOR GLASS OR CUP

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden



Source and Cost

Vanforeanstalten
Halsingborg, Sweden

Price about 10 crowns (2.68)

Description

The frame of this holder is made of hardened steel wire and is collapsible; the ring is made of plastic material and the balance chain is brass.

Purpose and Use

With this holder it is possible for a person with extremely weak hands to drink from cup or glass unaided. A very gentle pull on balance chain tips glass forward. Ring for finger can be placed on chain at desired height.

"MARY LEE" PATIENT ERECTOR AND AMBULATOR

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Manufacturer and distributor
M.L. Specialties Co., Inc.
Box 93, R. D. 1
Monticello, N.Y.

Standard Model for patients up to 5'6"		82.50
Large Model for 6' patients		90.25
Equipment includes inclination stand, ambulating gear and two safety belts.		
Extra Safety Belts	each	5.00
Adjustable Head Rest (fits any model)		7.50

The following models are for clinical use of short erection periods and are not equipped with belts, inclination stand, or ambulating gear nor is provision made for the addition of inclination stand or ambulating at a future date:

Patient Erector Board, Standard Model for patients up to 5'6"	45.00
Patient Erector Board, Large Model for 6' patients	50.00

Description

The "Mary Lee" Patient Erector and Ambulator consists of a light board (62" x 19" x 7/8") with safety belts and an adjustable aluminum frame to which board can be attached by screw handles. (The broad bands of leather padded with foam rubber shown in the picture were supplied by the Institute of Physical Medicine and Rehabilitation, since it was felt that these would be more satisfactory than the straps regularly used.)

The "Mary Lee" was designed as a means of getting paralyzed patients on their feet with minimal assistance. After bed has been stabilized to prevent movement during erection, the patient is placed on one side of bed, with the fully extended board beside him. He is then rolled on to the board, foot-board is locked in position, and safety belts fastened. The board is provided with a series of holes on either side so that safety bands can be used where needed: across the chest, across lower abdomen (a broad band) and across the legs just below kneecaps. Where additional abdominal support is needed, a Nu-Life Health Belt can be used. In case of neck instability, there are two holes at the top of board to include a chin strap.

When patient is securely fastened to board he is raised in either one of the following ways: the attendant swings the board crosswise of the bed, lowers foot-board to the floor, and slowly brings patient to erect position, or, preferably, if foot-piece of bed does not extend higher than mattress, the erector is not turned crosswise but is pulled over the foot of bed and so lowered to the floor. Ambulating gear and inclination stand may now be attached if patient is to remain up for any length of time. Five positions or angles of inclination, from nearly erect to semi-reclining, are quickly obtained. The inclination stand folds and locks out of the way against the erector when patient is being moved. (Special wheels for moving are easily attached.)

Purpose and Use

The erector provides a means of getting patients into a vertical position when this is desirable in cases of paralysis or serious fracture. The patient should be started at a reclining angle for a few minutes at a time; time should be increased slowly from day to day as patient is raised gradually to an upright position until he is standing 20 - 30 minutes twice a day. Use of the Nu-Life Health Belt is of assistance in preventing fainting before tolerance is acquired. Deep breathing also will help to overcome dizziness.

BED PULL-UP BAR

Submitted by: Physical Therapy Department
St. Francis Hospital
Wichita, Kansas

Source and Cost

Made by hospital maintenance department at St. Francis Hospital, Wichita, Kansas.

Description

A 5/8-inch plywood board 37" x 9" is inserted under the mattress of the bed, with a flange attached on either side just even with the outer edge of the mattress. An upright pipe 37 inches long is screwed into each flange. The 37-inch long pipe for the overhead pipe has a 6-inch pipe welded on the underside near each end to slip down inside the uprights.

Purpose and Use

This overhead bar was arranged for a patient having weak shoulder abductors, poor triceps and strong biceps.* The slings and springs can be easily pushed to one side if patient wishes to use side bar for pulling himself to an upright position for getting out of bed. The cross bar can be lifted out and a side bar quickly unscrewed if it becomes necessary to roll patient out of bed onto stretcher cart.

*Slings suspended from cross bar will support patient's arms while he feeds himself or otherwise uses his hands.

ADJUSTABLE BEDCLOTHES SUPPORT

Submitted by: Mrs. Caddie Timmons Drake
1235 Grant Street
Denver 3, Colorado

Source and Cost

Designed and distributed by
Mrs. Caddie Timmons Drake
1235 Grant Street
Denver 3, Colorado

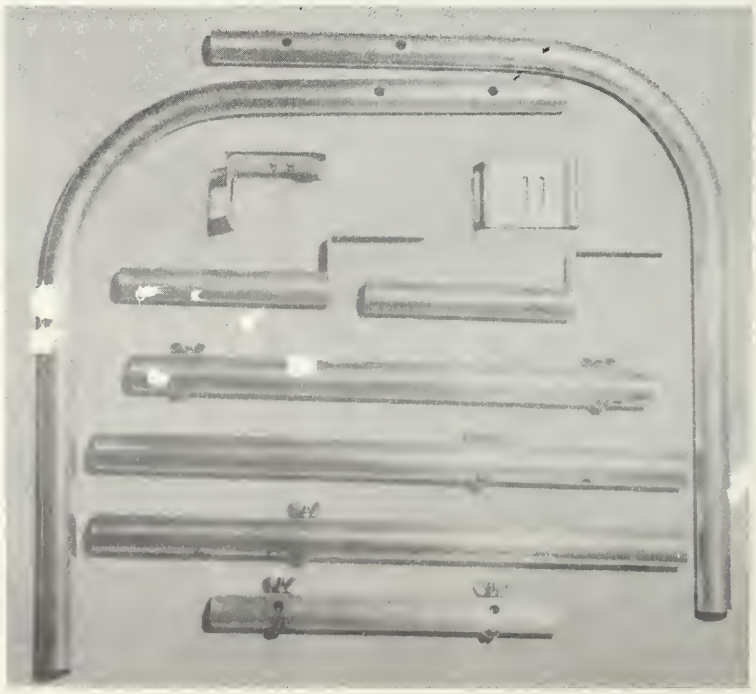
Tentative retail price 25.00

Description

The Adjustable Bedclothes Support is especially prepared for ease of adjustment by physically handicapped persons; there are no thumb-screws or projecting clamps used, and the wing-nuts are easy to adjust. Each one of these supports is made in eight separate sections which can be carried in an 18-inch case. One or more supports can be used on any bed, in hospital or home. Directions for assembling are provided.

Purpose and Use

These frames support the bedclothes in cases where it is desirable to keep bedding away from the body. They may also be used to support drainage or irrigation equipment, drawing board or reading matter. The supports will be especially convenient when drain tubes are being used, or after plastic surgery for decubitus ulcers, or when plaster casts are worn, and thus are most useful in cases of quadriplegia, paraplegia, or severe fracture. A support can be set up the long way of the bed if desired, and in this case an extension piece is available.



THERAPY FRAME

Submitted by: Adjustics, Inc.
428 East 67th Street
New York 21, N. Y.

Source and Cost

Maker and Distributor:
Adjustics, Inc.
428 East 67th Street
New York 21, N. Y.

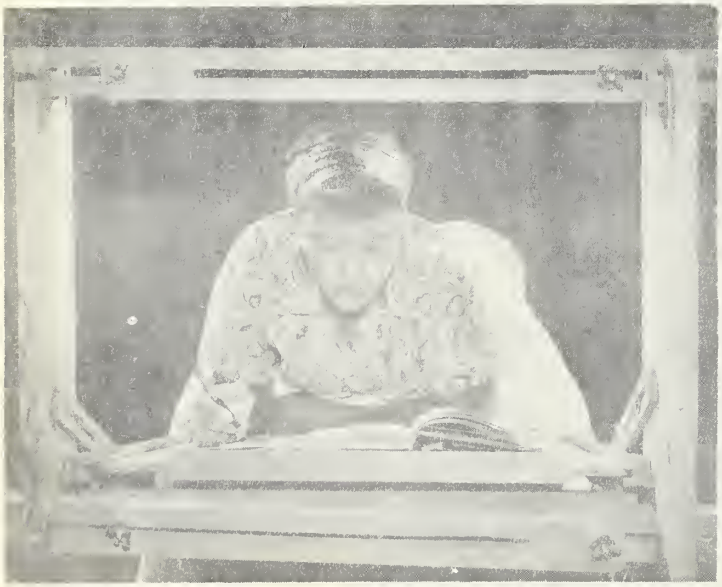
Price with attachments approximately 50.00 F.O.B.

Description

This easel-type wooden frame is fitted together by means of bolts and butterfly nuts and can be fixed at any desired angle. When taken apart for packing, the separate pieces fit together to make a perfectly compact bundle for storage.

Purpose and Use

The frame will hold the patient's work in a way that can be adjusted to his exact need, making it possible for a patient confined to some unusual position to weave, quilt, draw or engage in a number of other activities in the way of occupational therapy. The frame can be adjusted to accommodate persons in casts, and bed patients in many positions.



"TELE-REST"

(SHOULDER REST FOR TELEPHONE RECEIVER)

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Distributor
Breck's of Boston
Breck Building
Boston 10, Mass.

Catalogue number - G25F

Price 1.98

Description

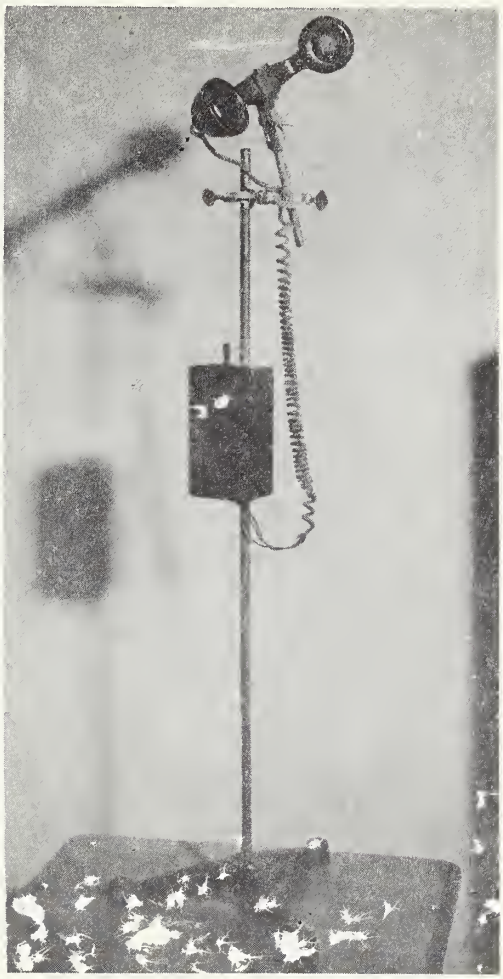
"Tele-Rest" is made of molded black tenite with clamp band to fit any telephone and a rubber cushioned shoulder cradle. It is adjustable for use at either ear.

Purpose and Use

This device leaves both hands free during telephone conversation. It is especially suitable for use by the unilateral upper extremity amputee, for with telephone receiver held in this way he will be able to take notes or otherwise use his remaining hand. Hemiplegics and persons with weak hands might find it useful also.

TELEPHONE STAND

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Designed at the Institute of Physical Medicine and Rehabilitation in cooperation with the New York Telephone Company.

Description

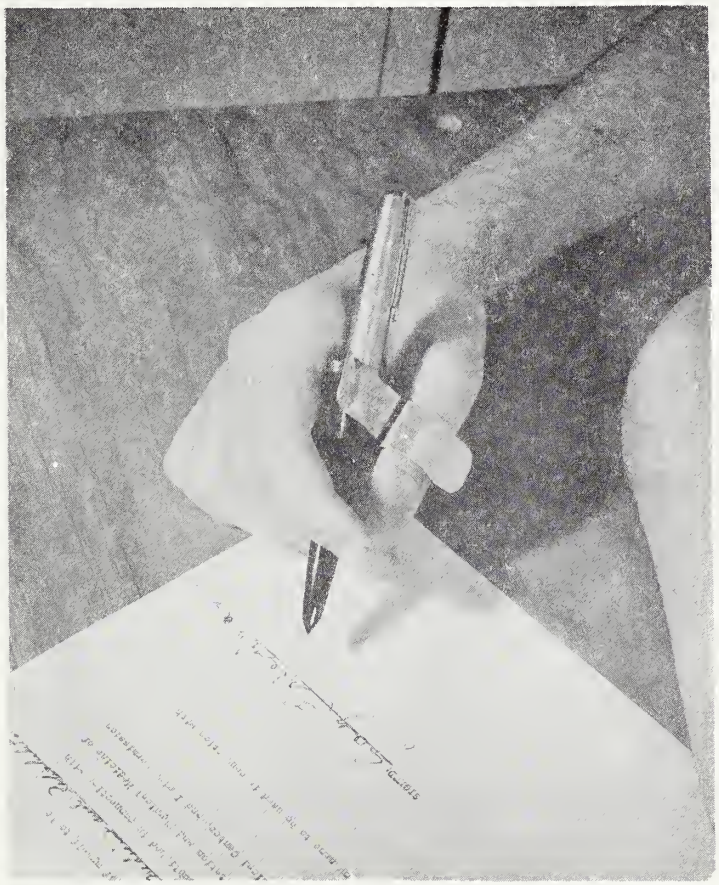
The telephone receiver is held in a vise on the shaft of a metal music stand by means of a series of clamps. It can be adjusted as desired. The telephone is opened and closed by a hand switch in the control box which is clamped to the stand at a convenient height.

Purpose and Use

The device is intended for a disabled person who has not full use of his hands and arms. It was designed originally for a patient affected in all four extremities by poliomyelitis. The stand is placed beside the patient's chair in a convenient position and the height of mouth piece is adjusted. The switch is easily opened; it can even be moved by use of arm alone, if hand is not strong enough.

ALUMINUM PEN OR PENCIL HOLDER

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Made in the Device workshop at the Institute of Physical Medicine and Rehabilitation.

Description

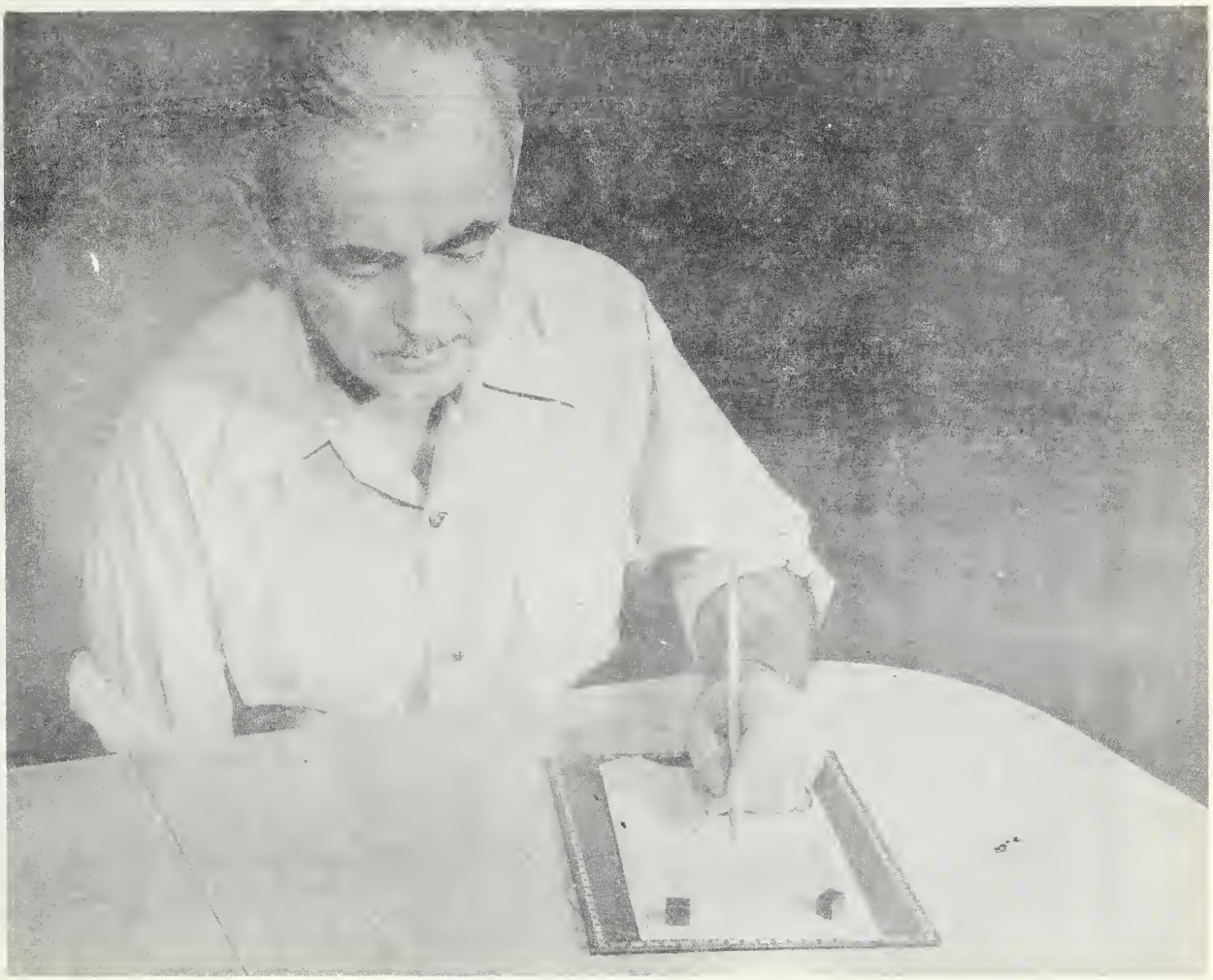
Pen or pencil is firmly held in a spring-clip which is loose-riveted to a band of aluminum (5" x 3/4"). The aluminum band is fitted to the writer's thumb in such a way that the pen or pencil remains in convenient position for writing, even on a very weak hand.

Purpose and Use

This device makes it possible to write with a weak or almost flaccid hand. It may be helpful to the traumatic quadriplegic, the multiple sclerosis patient, the person whose hands have been affected by polio, or even the partially recovered hemiplegic who may prefer it to learning to write with his left - or unaccustomed - hand.

MAGNETIZED BULLETIN BOARD

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Manufacturer
Magnetic Merchandising, Inc.
40 East 32nd Street, New York City

Distributors: Dennison, Altman, Lewis & Conger, Bloomingdale, and other department stores and toy shops

Board 8" x 10" with 2 magnets, pencil and memo pad	1.25
Board 11" x 14" with 4 magnets, pencil and memo pad	2.00
Board 14" x 18" with 6 magnets, pencil and memo pad	3.00

Description

Small magnetized cubes hold paper in place on this magnetized board. Although the cubes hold paper firmly, they are easily detached for replacement in any desired position.

Purpose and Use

The board and cubes serve to hold writing paper for persons having the use of only one arm, whether from amputation, hemiplegia, or residual poliomyelitis.

TYPING STICKS WITH FIBRE GLASS HANDLES

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made in the Device Workshop at the Institute of Physical Medicine and Rehabilitation.

Cost of materials approximately 1.00

Description

Two cylindrical sticks 5/16-inch in diameter are fastened to fibre glass cuffs made to fit the natural grasp of this quadriplegia patient. The tips are covered with slip-on pencil erasers. The fibre glass offers just enough resistence to make squeezing the cuffs a profitable hand exercise and the rubber tipped sticks make possible two-finger typing while strength is developed for the beginning of ten-finger typing.

Purpose and Use

The typing sticks might be used by anyone with enough hand power to manage them but not enough to attempt conventional typing. They may be particularly helpful to the post-polio patient for whose hands some return of strength is expected, for they encourage exercise and permit the patient to type while he awaits return of function.

READING RACK FOR WHEEL CHAIR TRAY

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made in the Device workshop at the Institute of Physical Medicine and Rehabilitation.

Cost of materials	approximately	2.00

Description

This plywood rack is held in place on the wheel chair tray by a clamp at either side. It is easily detached and folds flat for storage. The angle at which it stands when in place can be adjusted from either side, so that either hand can be used, in accordance with patient's convenience.

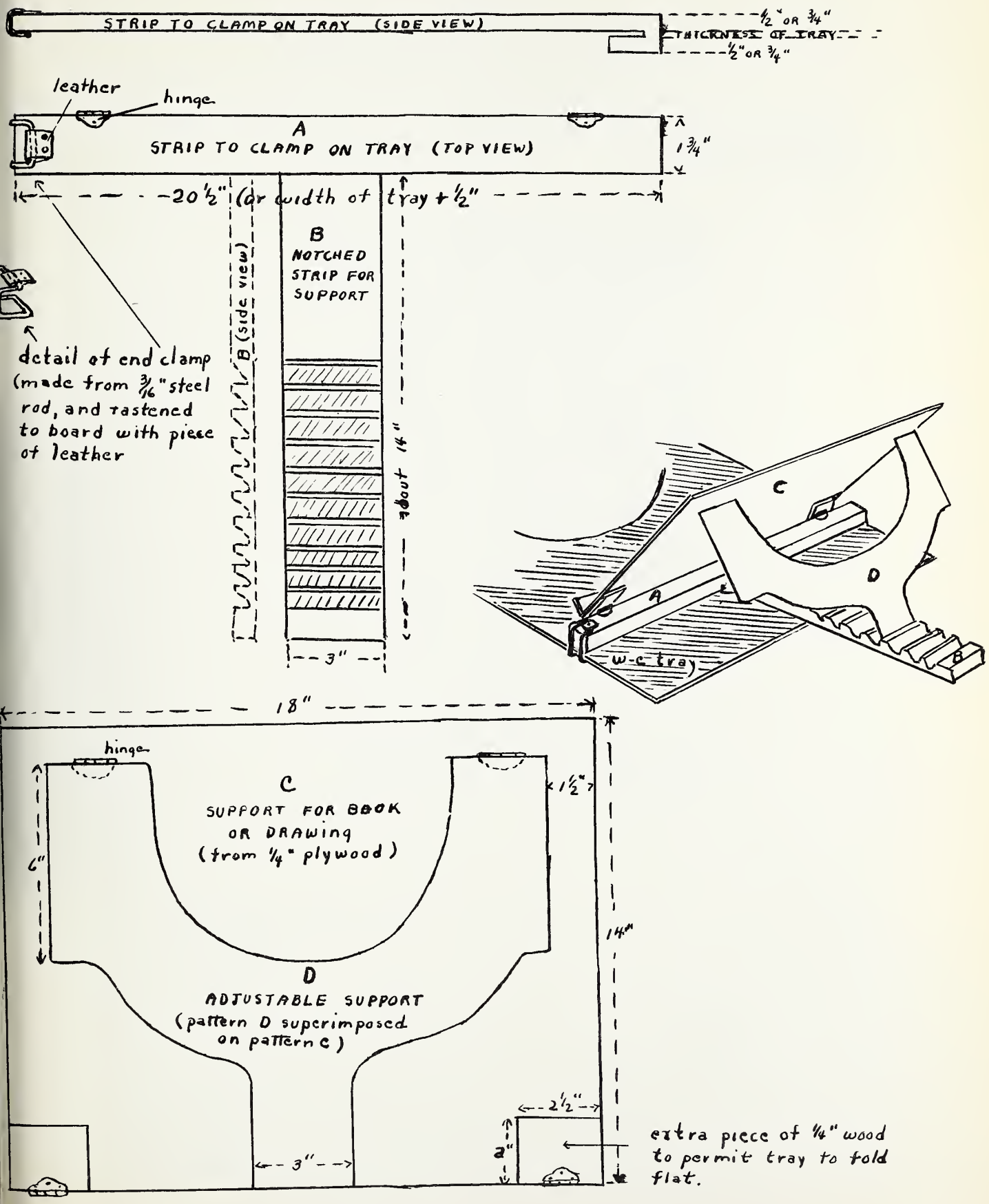
Below is shown a similar type of rack, using the same principle, which was incorporated as part of the wheel chair tray.

Purpose and Use

The rack was designed for reading and painting to meet the needs of wheel chair patients. It would be suitable for any wheel chair user, especially those with hands too weak to hold a book comfortably, such as a quadriplegic or person with hands affected by multiple sclerosis or polio.

READING RACK FOR WHEEL CHAIR TRAY

WORKING DIAGRAM - SCALE ¼" = 1"



"DISTAFF"

(MACHINE FOR ASSISTING THE ARMLESS)

Submitted by: Mr. A. W. Taff (inventor) via Steven M. Spencer
3 Simla Terrace Associate Editor
Napier, New Zealand THE SATURDAY EVENING POST

Source and Cost

For further information:
Disabled Servicemen's Re-establishment League
Lloyd Street
Wellington, New Zealand

Description

To operate this device, the armless person sits at a table and puts his feet into rests with toe caps. By moving these up or down or in different directions he can cause artificial arms above the table to make natural movements. The "Distaff" has been made of wood, but the inventor states that a strong, light metal would be a preferable material for its construction.

Purpose and Use

According to reports, it has been demonstrated - both by amputees and by man with paralyzed arms - that the "Distaff" can be used to cut up food, to raise eating utensils and cup to mouth, to handle a pencil, to type, and to light and smoke a cigarette.

"S E L E N E"

Prisma - Eyeglasses

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden

Source and Cost

Sold through
Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden Price: 51 crowns (about 10.20)

In ordering this equipment the model and the dimensions of the diameter should be indicated.

Also available at

E. B. Meyrowitz, Inc.
520 Fifth Avenue

Catalog Number R-19
Recumbent Spectacles
complete in case 35.00

MacGregor Instrument Co.
Needham 92, Massachusetts

Vim Bedspecs 20.00

Description

The Prisma glasses, mirror construction, are made in two models:

Model 1: For persons with normal vision. The glasses are equipped with brackets and come in two sizes - 40 and 42 mm. diameter.

Model 2: For persons who use glasses. A raised frame is attached to the glasses and can be adjusted to suit the patient's own eyeglasses. This model is made in three sizes, 40, 42, and 45 mm. diameter.

Purpose and Use

The Prisma glasses make it possible for a patient in completely supine position to read, work with his hands, or feed himself. With individual adjustments these glasses can be helpful also to persons whose movements of neck and vertebrae are fixed or limited, as in Marie-Strumpell disease.

"READ'N BED"

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made and sold by:
Bermat Products Corp.
74 Lafayette Street
New York 13, N. Y.

3.95

Description

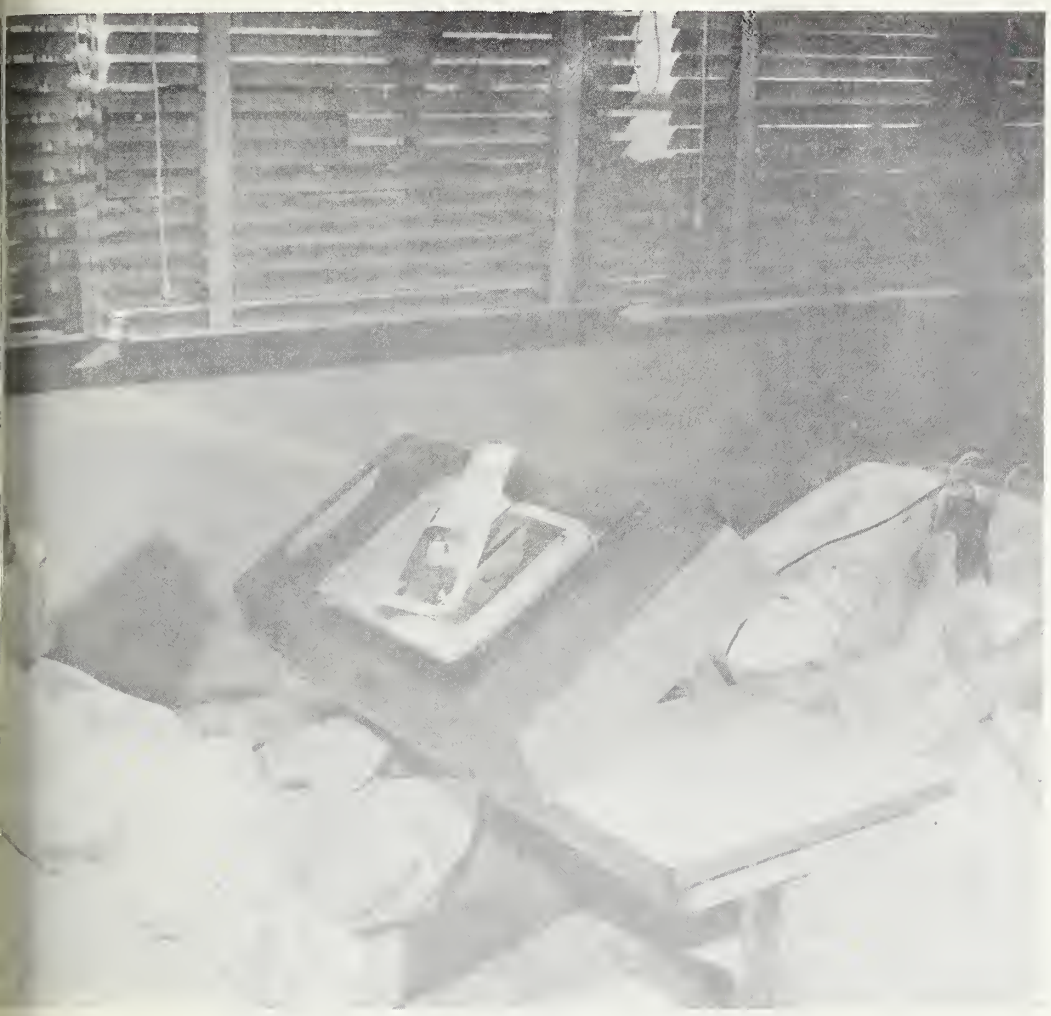
"Read'N Bed" holds book or magazine for reader reclining in bed. It can be adjusted to any desired angle and will hold book even when inclined toward the reader. The board is made of a light-weight building material, the legs of aluminum, and an acetate film strip secured by elastic holds book in place. When not in use, legs can be folded back against the board and the entire device can be stored flat in a drawer. Total weight is just over one pound.

Purpose and Use

"Read'N Bed" will be a convenience and a comfort to anyone able to read and confined to bed for a long or short period. It eliminates the fatigue of holding book and the difficulty of keeping it at proper reading angle. It can be used independently by anyone, even by a patient confined to the supine or slight hyper-extension position.

AUTOMATIC PAGE TURNER

bmitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

anufacturer and distributor:
eneral Textile Mills, Inc.
ew York 1, N. Y.
and
arbondale, Pennsylvania

ne Automatic Page Turner, with thread and clips	75.00 F.O.B. factory
pecial page turner, with wheel and masking tape ade to order	100.00

Description

This electro-mechanical page turner molded from laminated plastics is strong and durable yet weighs only $7\frac{1}{2}$ pounds. It consists of a tray which holds the book or magazine being read, a small motor and motor-driven drum which turns the pages, and a feathertouch switch. In operation, the device uses a thread to which thin metal clips, tied at intervals, are clipped onto the successive pages of the book in advance. When the switch is pressed, the drum turns, pulling the thread which turns the pages one at a time. The switch can be operated by chin, foot, elbow or hand.

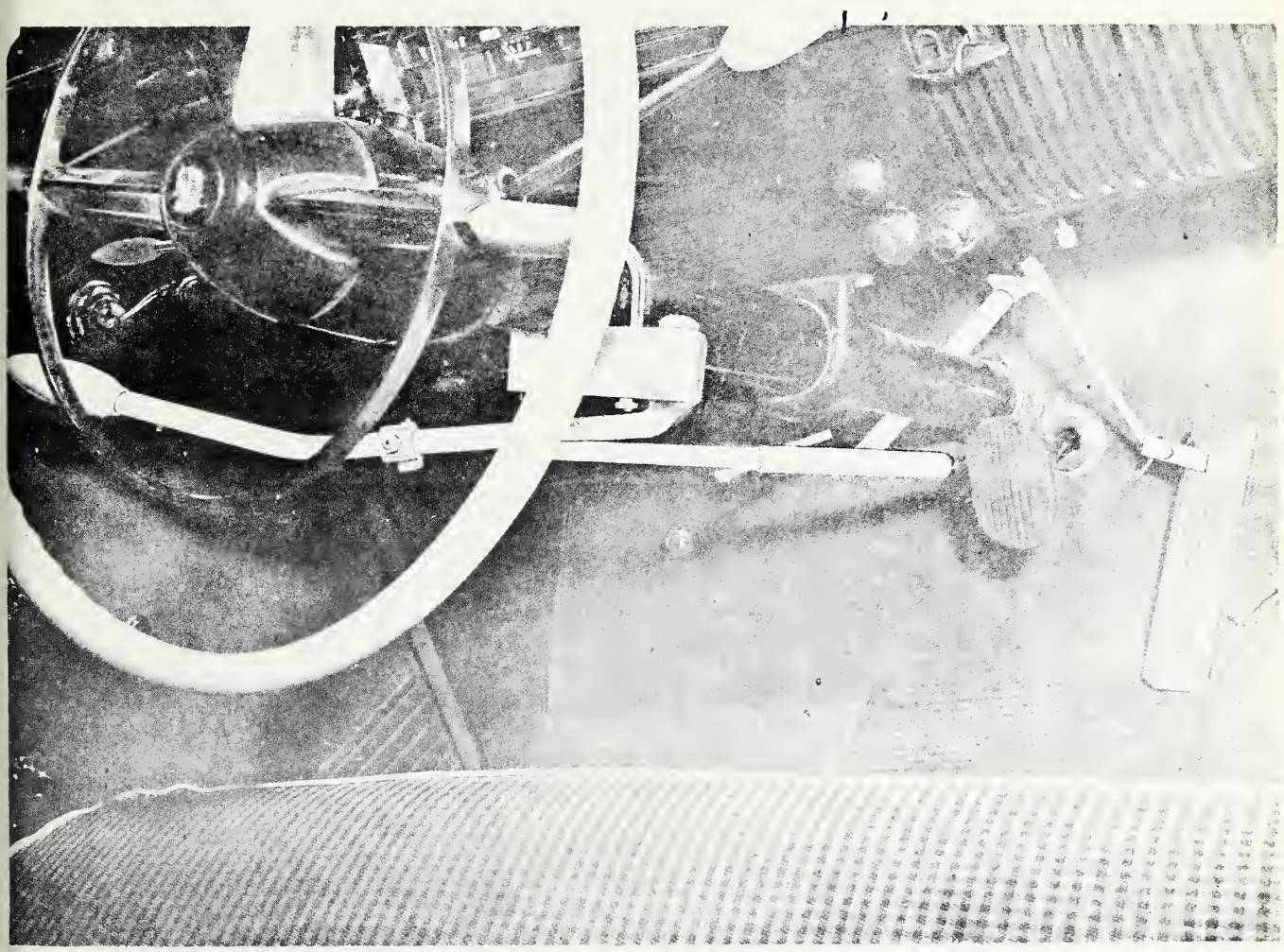
A page turner not dependent upon the book's being threaded in advance is now available on special order. In this page turner, a wheel bound with masking tape moves back and forth, picking up each page in turn and releasing it as it turns by rolling off the edge.

Purpose and Use

The purpose of the Automatic Page Turner is to permit a person without sufficient power in his hands to turn pages to have the pleasure of reading to himself. It can be used by upper extremity amputees, arthritics, traumatic quadriplegics, persons whose arms have been affected by polio, and others.

ARNOLD HANDICAP CONTROL
(Hand Brake and Gas Control for Automobile)

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Designed by M. Arnold Lerman
43-24 - 43rd Street
Sunnyside 4, N. Y.

Mechanical Hand Brake and Gas Control	75.00
Sold in package kits	49.50

Description

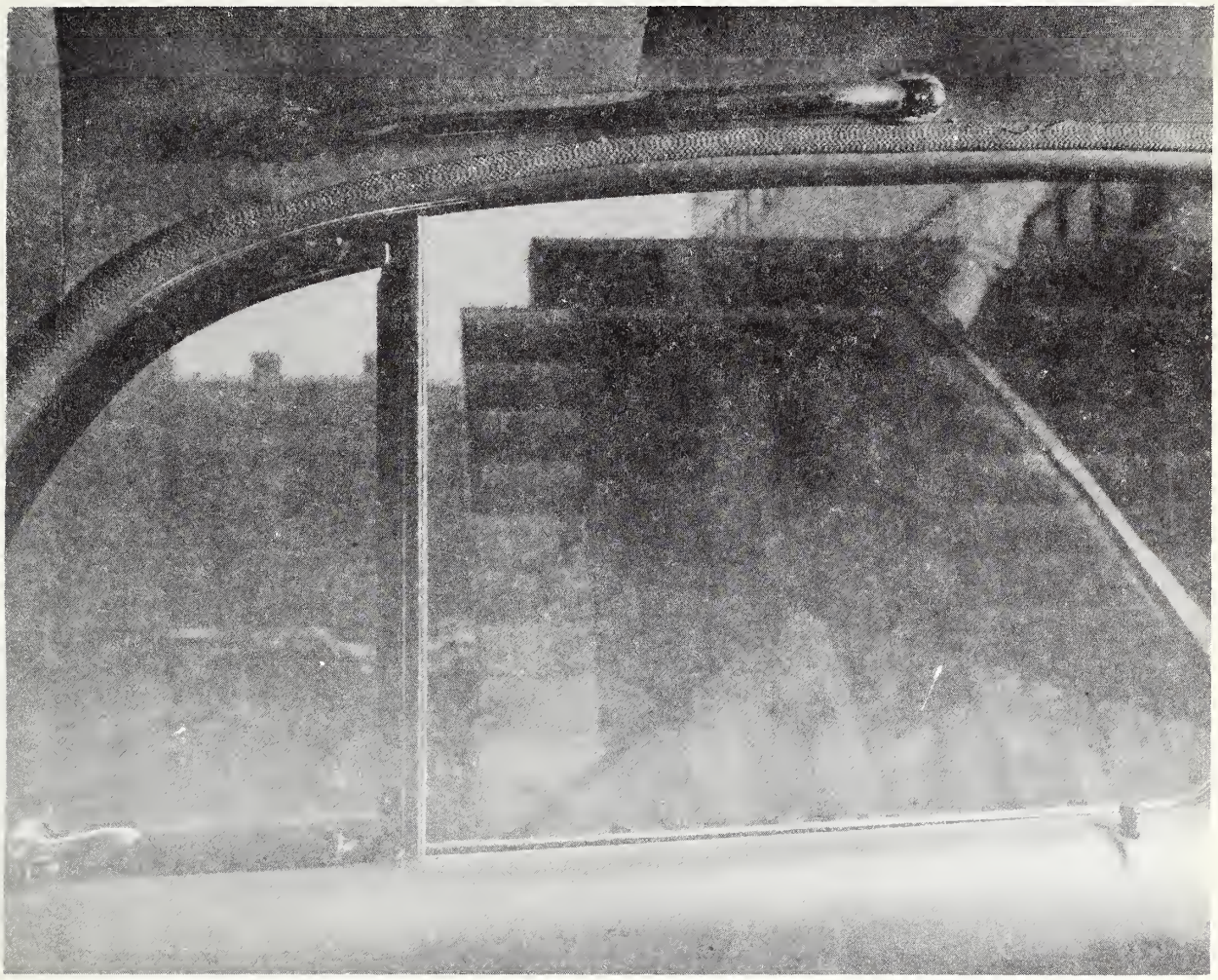
This patented mechanical hand brake and gas control operates with the touch of a finger, but can be adjusted to suit strength of grasp. One lever controls both operations and can be installed for right or left hand operation. Installation can be made on any make of car to fit the individual requirements of the driver. Installation can be made by any mechanic, a wrench and pliers being the only tools needed. A car with this device can be driven conventionally at all times, and can be serviced at any garage. Controls can easily be removed and transferred to another car.

Purpose and Use

This driving device is intended for persons who have lost the use of their lower extremities, whether by amputation, traumatic paraplegia, or poliomyelitis.

GRAB BAR FOR AUTOMOBILE

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

The grab bar is standard equipment for heavy duty trucks.
Model shown was purchased from Mack Trucks, Inc.

Description

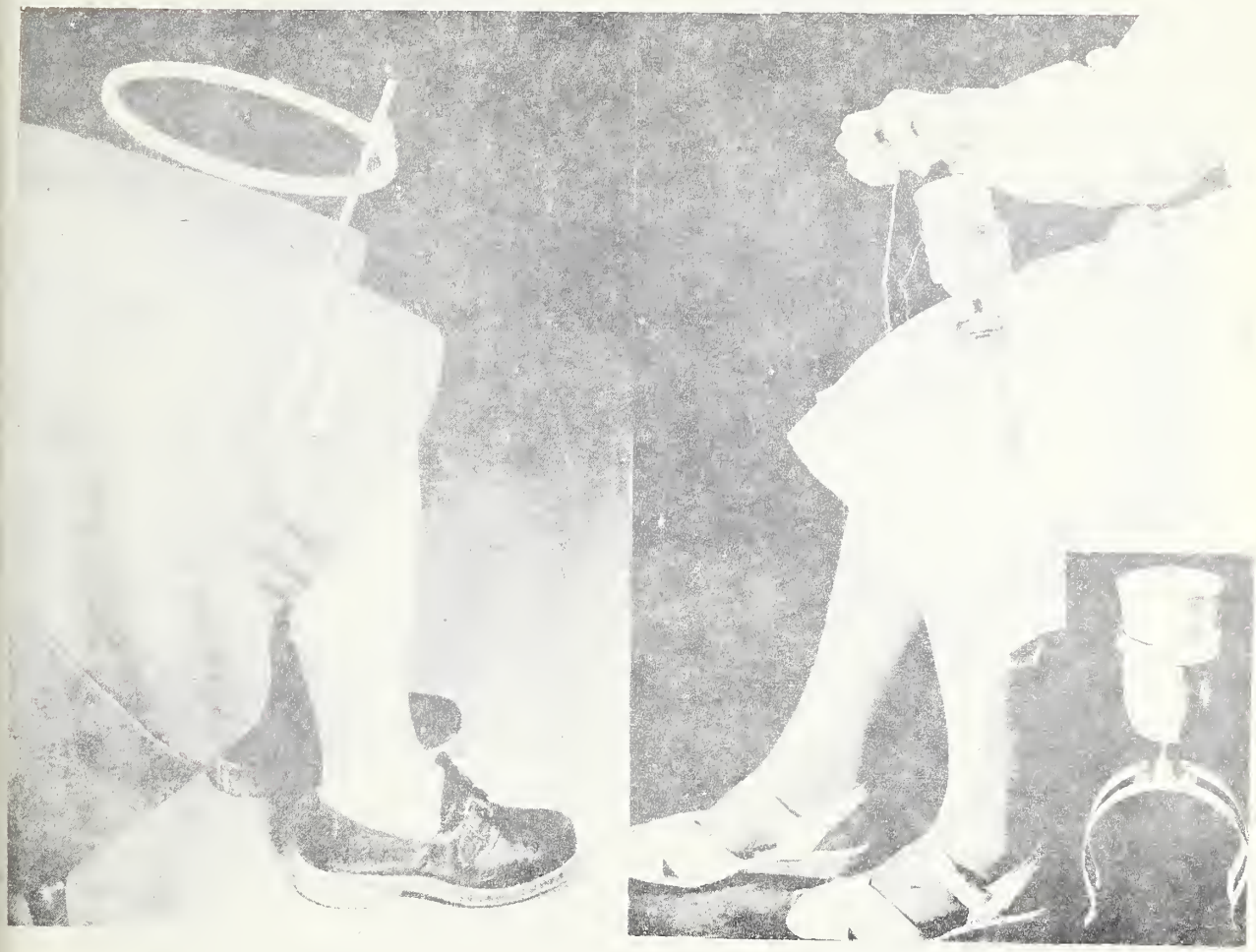
A strong chromium steel bar is securely fastened above the door of the automobile, at whichever door the patient enters the car.

Purpose and Use

This bar is intended to help the wheel chair patient in transferring from chair to car seat, provided he has the necessary strength in upper extremities to pull up on bar.

KNEE CLAMP HOLDER FOR EMBROIDERY RINGS OR DARNING EGG

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden



Source and Cost

Vanforeanstalten
Halsingborg, Sweden

Price about 20 crowns (5.36)

Description

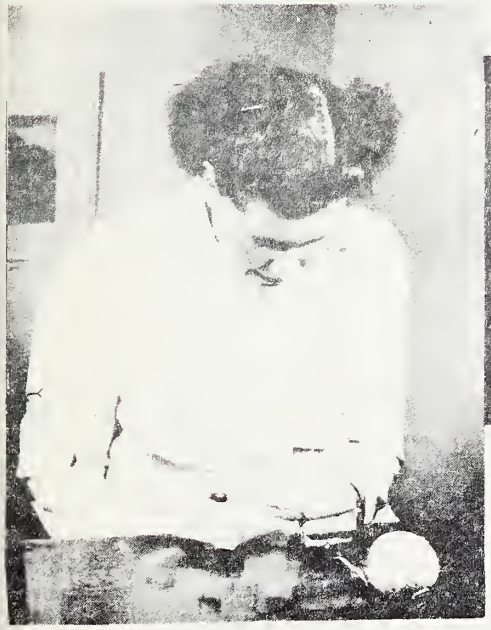
The holder itself is constructed of stainless steel; the brackets are partly covered by rubber; and the darning egg is made of polished hardwood with felt-covered sides. The holder can be raised or lowered or turned in various directions.

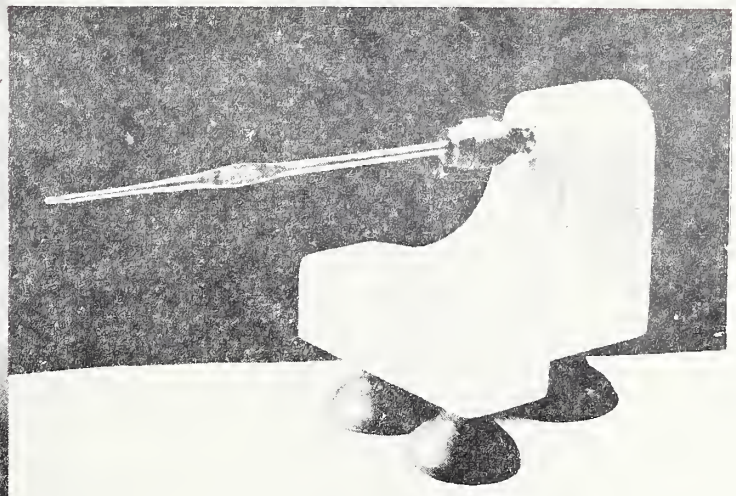
Purpose and Use

This holder makes it possible for persons having the use of only one hand to embroider or darn. It may be helpful to amputees, hemiplegics and those with a hand disabled by poliomyelitis.

SMALL HOLDER FOR KNITTING NEEDLE

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Back[illegible]
Stockho[illegible]eden





Source and Cost

Vanforeanstalten
Halsingborg, Sweden

Price about 10 crowns (2.68)

Description

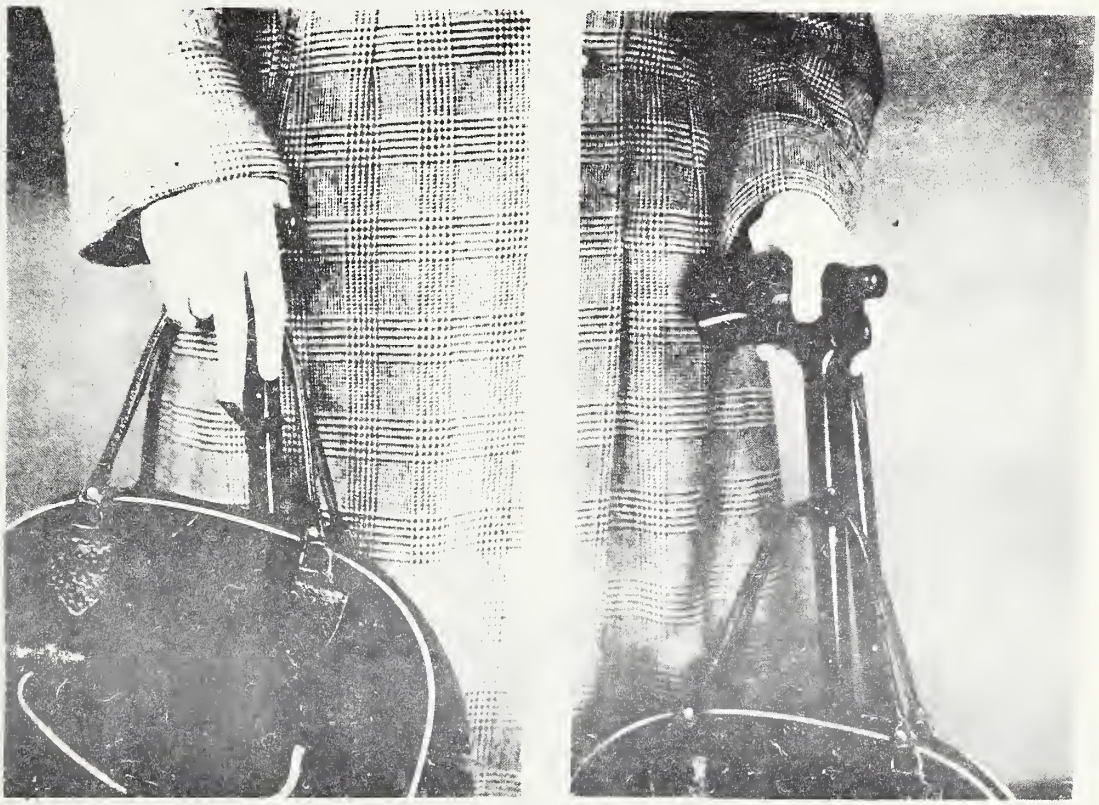
This holder is made of polished hardwood and the arrangement for holding the needle is similar to a regular "chuck". The device is held in place on table or other hard, even surface by its three suction-cup feet.

Purpose and Use

The holder makes knitting possible for persons having the use of only one hand, such as amputees, hemiplegics, and persons with residual polio disability.

HOLDER FOR A HANDBAG OR PACKAGES
(For persons who use two canes)

Submitted by: Svenska Vanforevardens Centralkommitte
Jutas Backe 1
Stockholm, Sweden



Source and Cost

Manufactured by
Norrbackainstitutet
Stockholm, Sweden

Price: 3 crowns (about 60 cents)

Description

The holder is made of brass and is screwed to the cane at a suitable distance from the handle. When not in use it fits against the cane, but can be opened with a touch of the finger to form a hook. It is available in black or brown and in two sizes, for men or women.

Purpose and Use

The holder offers a convenient means of carrying a light bag for those who walk with the aid of two canes, such as bilateral lower extremity amputees and some arthritics.

HOLDER FOR PAINT BRUSH, DRAWING PENCIL OR CHARCOAL

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made in the Device Workshop at
The Institute of Physical Medicine and Rehabilitation

Cost of materials:	Metal	approximately .50
	Chrome plating	1.00

Description

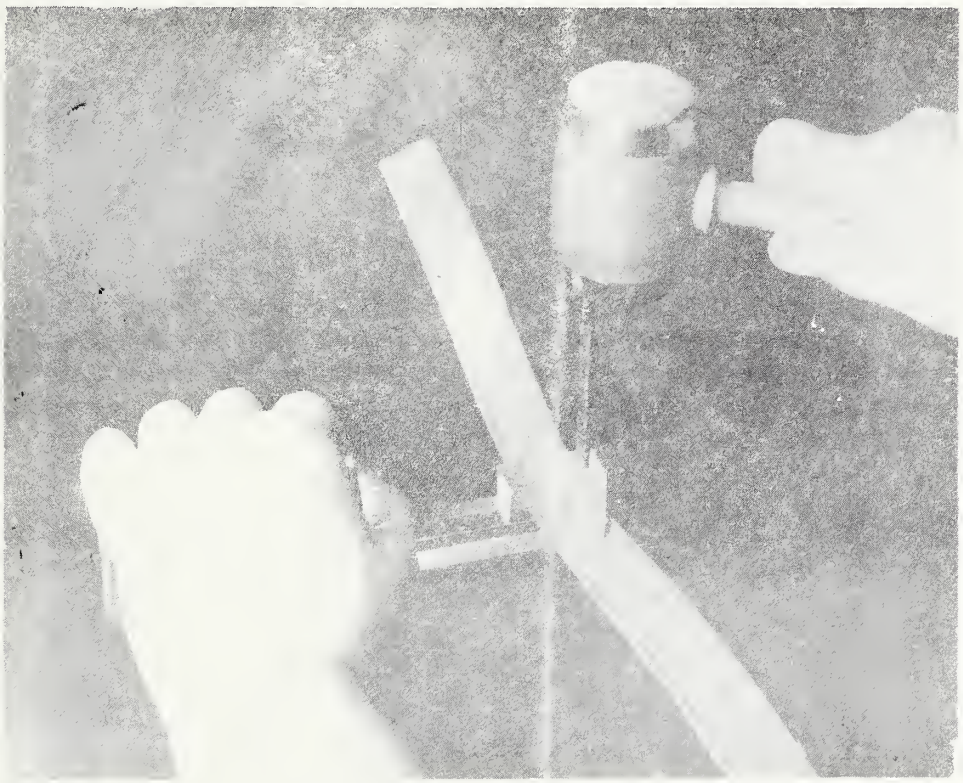
This holder (aluminum and steel with chrome plate finish) is made with Universal type joint with adjustable friction so that any angle of utilization is permitted; brush can be tilted upward, downward or sidewise to reach edges of picture. Also, charcoal or pencil can be turned broadside to the paper to make wide strokes for shading.

Purpose and Use

The photograph shows a quadriplegia patient drawing with charcoal which is held at the end of his upper arm, at the elbow. This young man has sold some of the paintings he has done in this manner. The holder might also be used by an upper extremity amputee with an above-the-elbow amputation. The principle of the Universal joint, with suitable arrangement for attaching to wrist, might be used by a hand amputee.

PLASTIC TOOL HOLDER

Submitted by: Ardis A. Gabel, OTR
Occupational Therapy Section, GM&S Hospital
Veterans Administration Center
Los Angeles 25, California



Source and Cost

Made in Occupational Therapy Department, GM&S Hospital.

Description

This therapeutic adjunct is made from three pieces of plastic:

1 piece 3-inch dowling 4 inches long
2 pieces plastic rod - $\frac{1}{2}$ inch x 6 inches
$\frac{1}{2}$ inch x $1\frac{1}{2}$ inches

The three pieces are cemented together as shown and a hole is drilled through the plastic rods.

Purpose and Use

This device is used in leather work when co-ordination and finger dexterity are limited and not likely to improve. In such cases the problem of maintaining a normal working position of the affected extremity is ever present. Use of this holder permits the patient to achieve the correct position. The repetitious use of this position forms a good habit pattern.

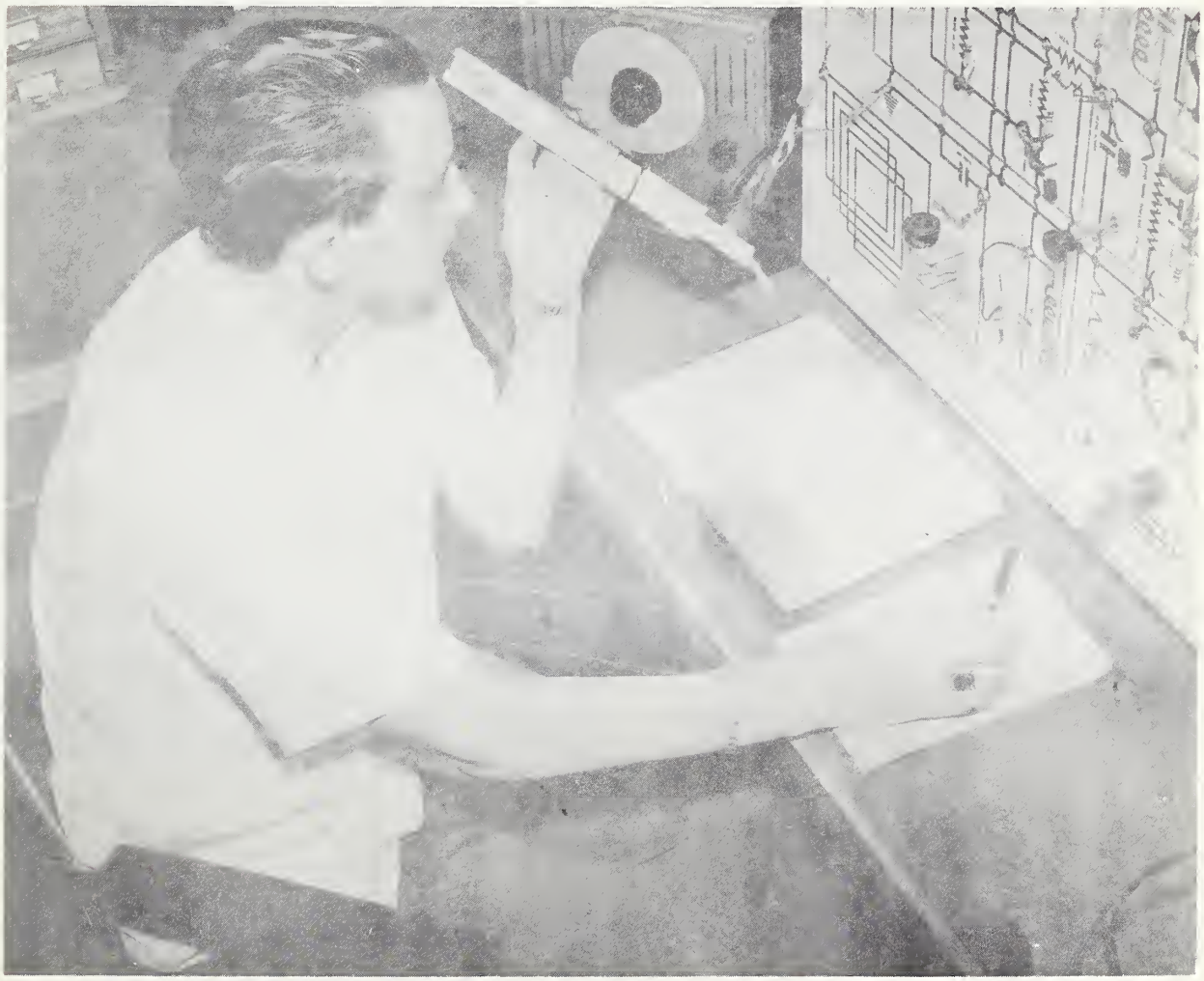
Motivation of the patient is increased when his skill is comparable to that of others without his handicap and permits him to identify himself as one of the group.

The advantage of using plastic in the construction of this device lies in its transparency, which allows the work to be seen through the holder. The device was originated for the hemiplegic patient and can be altered to meet the specific needs of those who have difficulty with dexterity and stabilization in one hand.

SLIDE-RULE HOLDER AND OPERATING DEVICE

Submitted by: Veterans Administration Hospital
Hines, Illinois
Kelso A. Carroll, M.D., Manager
Louis B. Newman, M.E., M.D., Chief
Physical Medicine Rehabilitation Service

Developed in the Manual Arts Therapy Unit of the Physical Medicine Rehabilitation Service in collaboration with the Prosthetic Appliances Unit.



Source and Cost

Made in the Prosthetic Appliances Unit, Veterans Administration Hospital, Hines, Illinois.

Description

A plastic hand band is fastened to the back of slide rule. To each end of the sliding part of the rule is fastened a leather loop made of $\frac{1}{4}$-inch thin leather strip.

Purpose and Use

This device permits patients with insufficient function of the fingers, particularly those having poliomyelitis, paralysis due to cervical cord injury, or other neurological or neuromuscular dysfunction, to hold and use a standard slide rule. Persons with marked limitation of motion in their hands and fingers due to arthritis can also benefit from this device.

PORTABLE ADJUSTABLE CHINNING BAR

Submitted by: Veterans Administration Hospital
Hines, Illinois
Louis B. Newman, M.D., Chief
Physical Medicine Rehabilitation

Source and Cost

Originated and developed by
Norman N. Tenner, Assistant Chief
Corrective Therapy Section
Veterans Administration Hospital
Hines, Illinois

Made and sold by
Norco Enterprises
2720 North Troy Street
Chicago, Illinois

Price $47.50

Description

This bar, in triangular metal bracket, can be hooked to the stall bars in the gymnasium at whatever height is desired. The whole device folds into a compact unit.

Purpose and Use

This bar is an exercising device for the patient with paraplegia, whether caused by trauma, poliomyelitis, or pathological condition such as spinal cord tumor. In lowered position the bar affords means of chinning exercises for upper extremity development. Patient can also use bar to assume standing position in braces, or to exercise from standing position when bar is raised. Bar can be used from wheel chair also. Use of the bar is conducive to development of shoulder depressor and elbow musculature especially. Good upper extremity development is the basis for good crutch walking.

THE RESTORATOR

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made and sold by:
RESTORATOR
640 Madison Avenue
New York 22, N. Y.

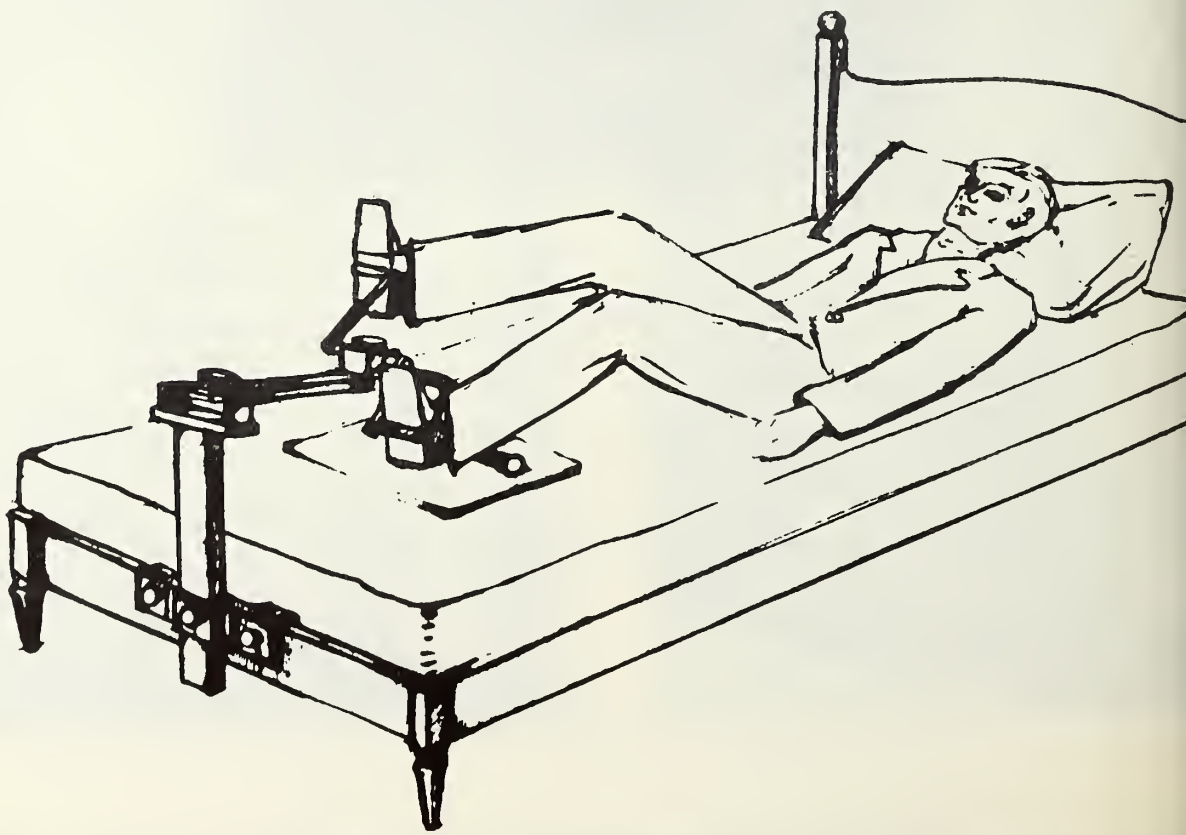
Pamphlets and price upon request

Description

The Restorator utilizes the principles of the bicycle and the rowing machine and can be adjusted for either type of exercise, reciprocal motion or rowing motion. It can be used from bed, wheel chair, or straight chair and for exercising foot, ankle, leg, hip, wrist, arm or shoulder, according to its adjustment for the individual patient. Range of motion and resistance can be increased as patient gradually improves. The attachment (to bed, chair, or wheel chair) is quickly and easily made, the adjustments are easily managed with capped screws, and the amount of adjustment gives range from little motion to full motion, from minimum strength to maximum resistance, - the only exception being full extension of the hip joint and shoulder.

Purpose and Use

The Restorator was designed for patients needing the kind of exercise it offers but unable to mount and balance on a bicycle seat or to get in and out of rowing machine. It is used for increasing joint movement and muscle strength after poliomyelitis, cerebral accidents, nerve injuries and bone fractures, and in the rehabilitation of patients with cerebral palsy, arthritis, muscular dystrophy, or multiple sclerosis.



Pedals Adjusted For Rowing Motion

Model Attached To Straight Chair

Attached For Upper Extremities

WHEEL CHAIR STOPS

Submitted by: Mr. Alonzo Joseph Holmes
Campbell Avenue (R.F.D. 1)
Suffern, N. Y.

Source and Cost

Made for Mr. Holmes by a friend.

Description

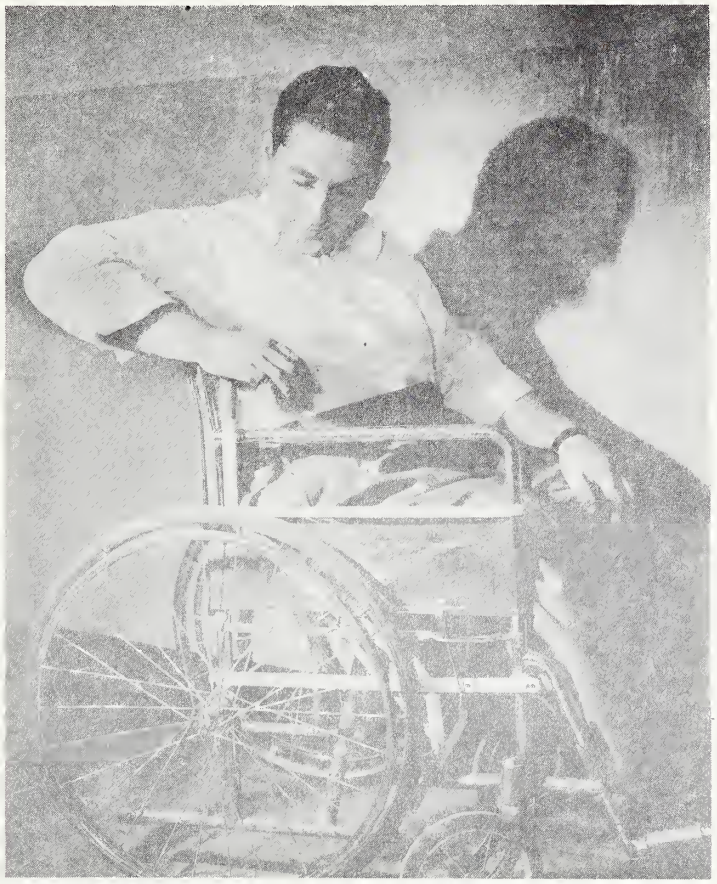
These stops are stout iron bars, about 8 inches long, at one end turned to form a screw eye, at the other end threaded to hold a nut about two inches from the tip. A bolt and nut fasten the screw-eye end through the horizontal piece at either side of the wheel chair a few inches from the tip; the other end, below the nut, is covered with a rubber cane-tip. When the stops are not in use, they can be turned back to lie along the horizontal bars and each stop is provided with a small crosspiece to prevent it from falling to the ground.

Purpose and Use

The stops are intended for the wheel chair of a user sufficiently active to be able to put them down and up again by hand. Their purpose is to keep the chair from rolling backwards when it is being propelled up hill. That is, a patient propelling his own wheel chair up an incline can rest whenever he desires without losing any of the ground gained, since when the stops are turned down the chair will go forward as usual but cannot roll back. These stops would be suitable for use by a paraplegic with good upper extremities.

ARNOLD WIDTH CONTROL

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Designed and distributed by:
Arnold Lerman
Arnold Devices, Inc.
310 East 34th Street
New York 16, N. Y.

Price	29.50
Installation	7.50

Description

A lever attached to a support connected (or clamped) to the frame of the wheel chair is used to push the cross members of the frame together by means of a rod and pipe slide. The slide gives the chair a free folding action and keeps handle of control stationary when not in use. It can be installed on either side of wheel chair.

Purpose and Use

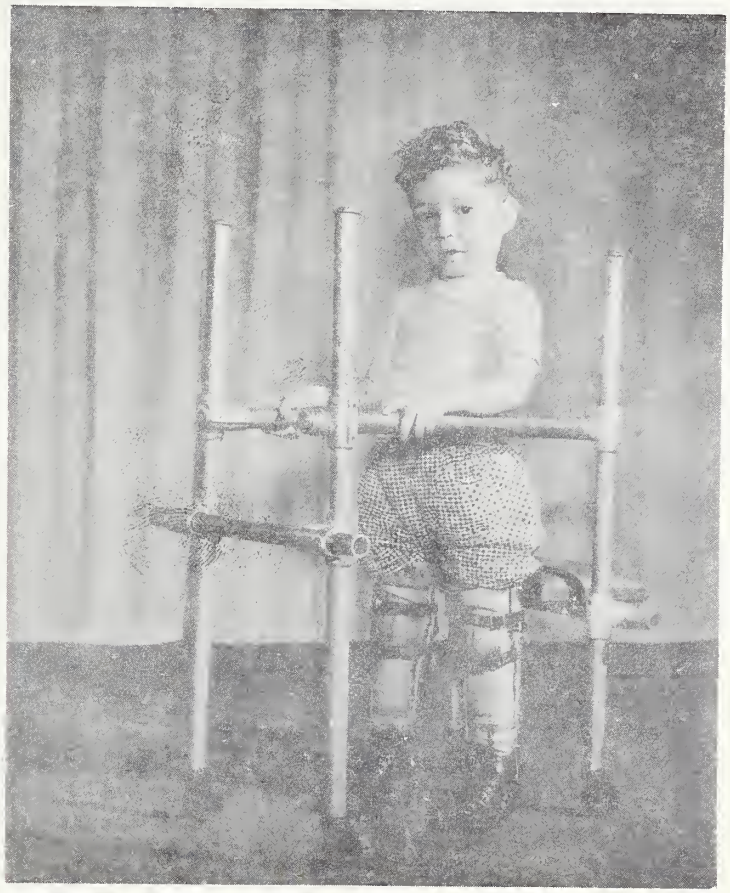
This control permits the wheel chair to go through almost any door, with no more effort than is required to push a lever forward. It can be attached to almost any folding wheel chair and will narrow the chair by at least $3\frac{1}{2}$ inches. The device may be a great convenience to almost any wheel chair user provided he has at least one good arm, especially those who face the daily problem of a bathroom door too narrow to admit the chair.

Chair Before Narrowing

Chair After Narrowing

CHILD'S WALKER

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Made and sold by:
Mr. J. O. White
22 Hawthorne Place
Malverne, N. Y.

Price: approximately 25.00

Description

This child's adjustable walker is constructed of aluminum tubing, with leather-covered seat of padded wood and 5-inch hard rubber casters. There are no welded parts and adjustments can be made in any direction (width, height of bars, etc.) with a small Allen wrench. The walker moves easily in all directions on its rotating casters. Weight comes to about 12 pounds including seat and binding on arm rails.

Purpose and Use

The walker may be used to teach walking to children that need help in this direction, whether because of cerebral injury, polio, or other causes. In the case of a child unable to grip the side bars, these may be raised and brought nearer together until the child rests on them as on crutches.

ANTERIOR ANKLE STRAP

Submitted by: Kernan Hospital for Crippled Children
Baltimore 7, Maryland

Source and Cost

Made in the Occupational Therapy Workshop.

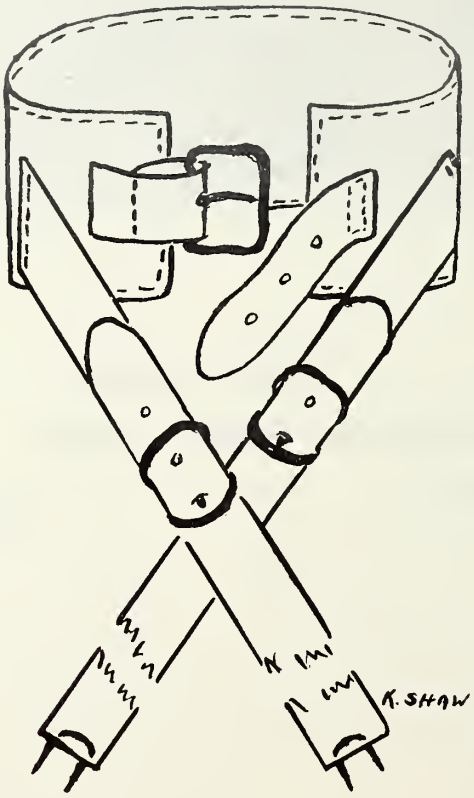
Cost of materials approximately 75 cents

Description

This device is made in the form of a leather collar, approximately 7" x 3", that is fastened around the wearer's ankle by means of strap and buckle, which are worn towards the front. Two cross straps are stitched to the collar - one at either side of opening - and are stapled or stitched to sole of shoe on opposite side. Length of these straps is adjusted by buckles.

Purpose and Use

The device is intended to give better clearance in walking to a slightly dropped foot for which a steel brace is not indicated. It is useful principally for children with feet affected by polio, - generally, only as a temporary measure. The crossing of the two straps, with buckles, permits some correction where there is also a tendency to either eversion or inversion.



TRICEPS CRUTCH

Submitted by: Physical Medicine and Rehabilitation Service
Bellevue Hospital
New York 16, N. Y.

Source and Cost

Made in the Workshop of the Physical Medicine and Rehabilitation Service at Bellevue Hospital.

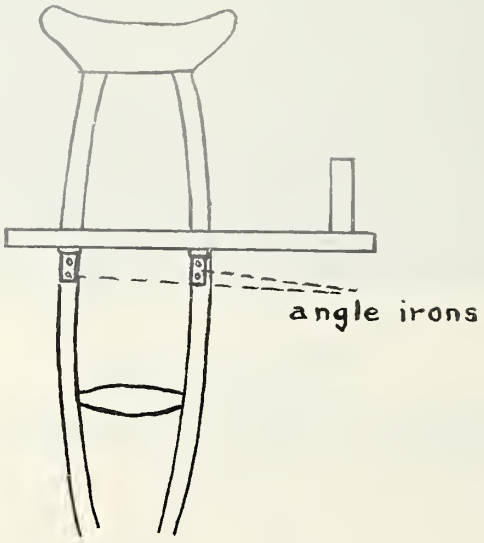
Cost of materials approximately 75 cents

Description

A ½-inch board (approximately 14" x 4") is fastened to the crutch by metal angle irons at a right angle to the shaft and at a height to permit the forearm to rest upon it comfortably when user is in walking position. A wooden dowel is secured to the board in convenient position to be grasped by the hand. The board is padded for comfort.

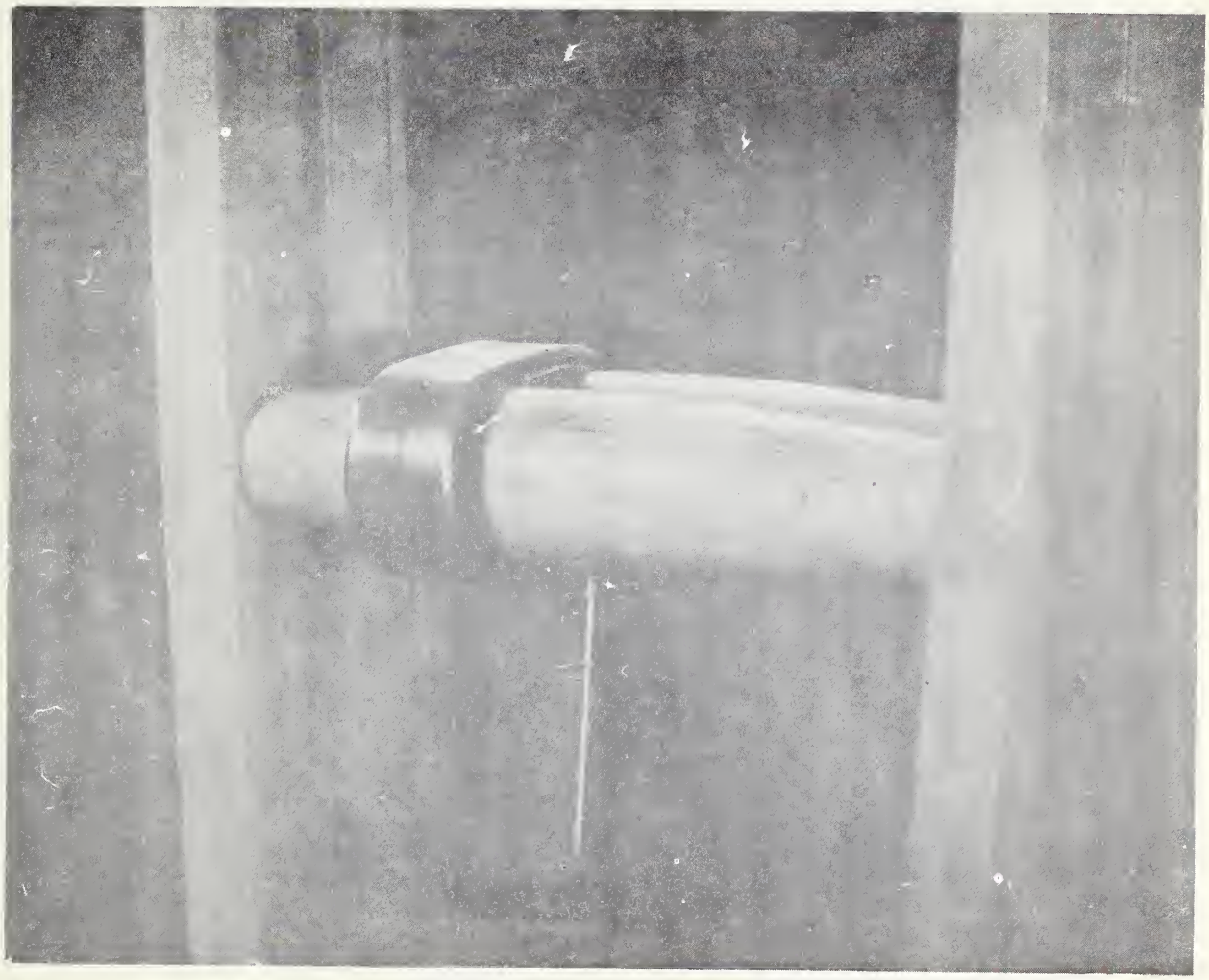
Purpose and Use

This type of crutch is intended for patients with loss of triceps muscles when strong biceps are present. With forearms flexed at right angles and hands grasping the dowels, the patient is able to support himself on his forearms and to lift crutches by biceps action. The triceps crutch makes crutch walking possible for many polio patients with weak triceps and good biceps.



ALUMINUM CRUTCH HOLDER

Submitted by: Physical Therapy Department
Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Developed in the Physical Therapy Department at the Institute of Physical Medicine and Rehabilitation

Cost of materials about 25 cents

Description

This aluminum strip is slipped over the crutch handles with straight piece held at right angle to shafts. The straight piece is then pushed down parallel to shafts and the two crutches are locked together.

Purpose and Use

The crutch holder keeps the crutches together when this is desired, as in going up and down stairs, without danger of one or both of them falling. It is useful for any crutch user, but especially those with hand too small to hold both handles comfortably. The device can be used also to keep crutches together when not in use.

RICHARDS UTILITY CRUTCH BAG

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made and sold by
Maine Metal and Plastic Research Co.
119 Morning Street
Portland, Maine

Description

This sturdy black canvas bag (12" across top - 8½" across bottom - 16" long) is fastened to crutch by elastic band at bottom and two webbing straps at top. The telescoping sides permit expansion to a thickness of 3 inches when bag is tightly packed. Weight is evenly distributed to carry maximum load with minimum tendency to imbalance.

Purpose and Use

The utility crutch bag can be used to carry school books, magazines, knitting, extra wraps, or any material ordinarily carried in a brief case. It can serve as an overnight bag. The device is suitable for any crutch user strong enough to attempt carrying extra weight of any kind.

SUPPORT FOR FLAIL WRIST

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made in the Device Workshop at the Institute of Physical Medicine and Rehabilitation

Cost of materials — approximately 50 cents

Description

A leather strap (1" to 1¼" wide) for the wrist and another that fits across the metacarples of the hand are joined by two pieces (½" by 5½") of .008 or .010 tempered blue spring steel - one slightly shorter than the other - held together by a half-inch rubber band and covered with leather. The center piece is held to cuffs by a rivet on either end. (Note: In fastening the center piece to the cuffs, only one piece of spring steel should be riveted. This allows for play between the two pieces of steel during movement. Also, rivets allow for a swivel adjustment for better fit to hand or for conversion from right to left hand use or vice versa.) Hand strap has leather pocket to hold spoon or other utensil.

This device can also be made of neolite, a new product neither leather nor plastic but having many of the qualities of each. It can be stitched, is washable, and is extremely durable.

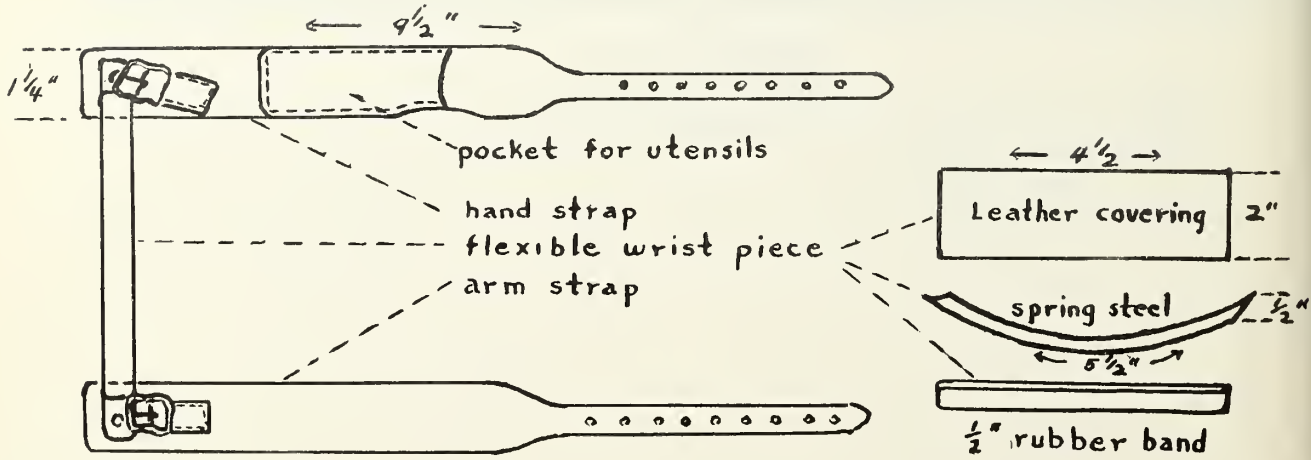
Purpose and Use

This device offers:

1) a support for dropped wrist, to prevent deformity or contracture

2) sufficient stabilization, yet with some flexibility, so that wearer with flail or weak wrist can utilize what motion or power is left (and thus it assists in propelling wheel chair and in using crutches)

3) pocket attachment in the hand strap to hold various utensils and so make it possible for patient to feed himself, comb his hair, brush his teeth, shave, etc.



for right hand

SUPPORT FOR FLAIL ARM

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

Made in the Device Workshop at the Institute of Physical Medicine and Rehabilitation.

Cost of materials

Splint	approximately	4.00
Leather and buckles	"	1.00

Description

The leather strap (webbing could be used) which forms this arm sling hangs from the opposite shoulder and crosses the back, the two ends of the strap being attached to the molded arm piece at elbow and hand. In this case, a molded fibre glass arm piece was used to give rigid support to the arm because of intense pain suffered by patient. A canvas or cloth support for the arm can be used in most cases.

Purpose and Use

This device supports a flail arm in a comfortable position at a right angle, eliminating shoulder subluxation as far as possible. This type of sling also eliminates pressure on the back of the neck caused by usual type arm support sling.

ARM BRACE

(Support for Flail Arm with Subluxation of the Shoulder)

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.

Source and Cost

M. J. Winterkorn
334 East 86th Street
New York 28, N. Y. Made to order

Price (including all new changes) 95.00

Description

The molded leather shoulder piece and the rigid side support holds head of humerus in glenoid cavity. The dial-joint at elbow permits placing the arm in any position of function for various activities, and a cock-up piece supports the hand.

A new model, not shown, has three new features:

(1) a special joint between lower end of the shoulder piece and the arm piece, permitting some outward rotation of the arm,

(2) the dial joint at elbow is placed on the inside, next to the body, so that unlocking may be done by pressing the arm against the body,

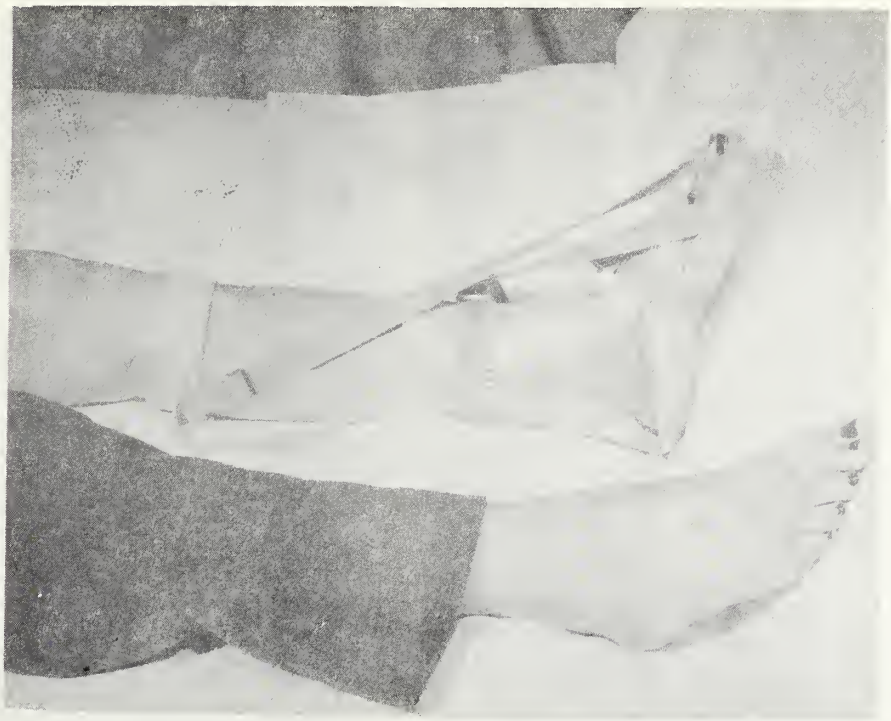
(3) the cock-up attachment is made adjustable with spring and slot for adduction and abduction of the wrist; it is released for change of position by slight touch against table or other object.

Purpose and Use

This arm brace prevents subluxation of shoulder and holds arm and hand in good position, contributing to normal appearance. It makes possible the utilization of any remaining finger strength for such activities as holding writing paper or open book on desk or for typing.

NIGHT SPLINT TO CORRECT FOOT DROP

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.



Source and Cost

Made in Device Workshop at the Institute of Physical Medicine and Rehabilitation.

Cost of materials approximately 6.00

Description

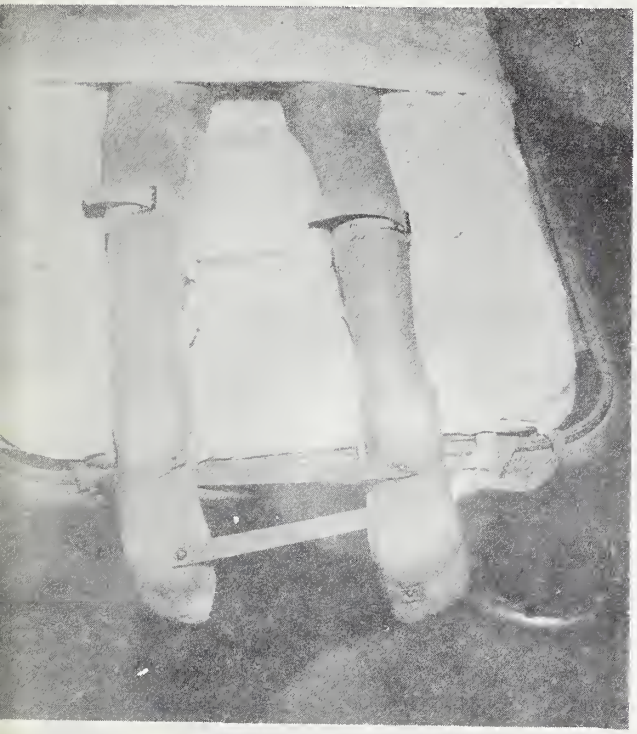
The splint is made of two layers of fibre glass molded to the patient's foot and leg, except at the heel, where the material is allowed to spread out flat to permit only two dimensions at that point (no contour). A separate tongue-like piece of fibre glass is fitted over the instep and lower shin, and two lengths of belting hold both parts of device in place, - one across foot, one across lower leg. A cross sling supports foot at base of toes, this sling being fastened to either side of leg piece, at sides of top, by buckle.

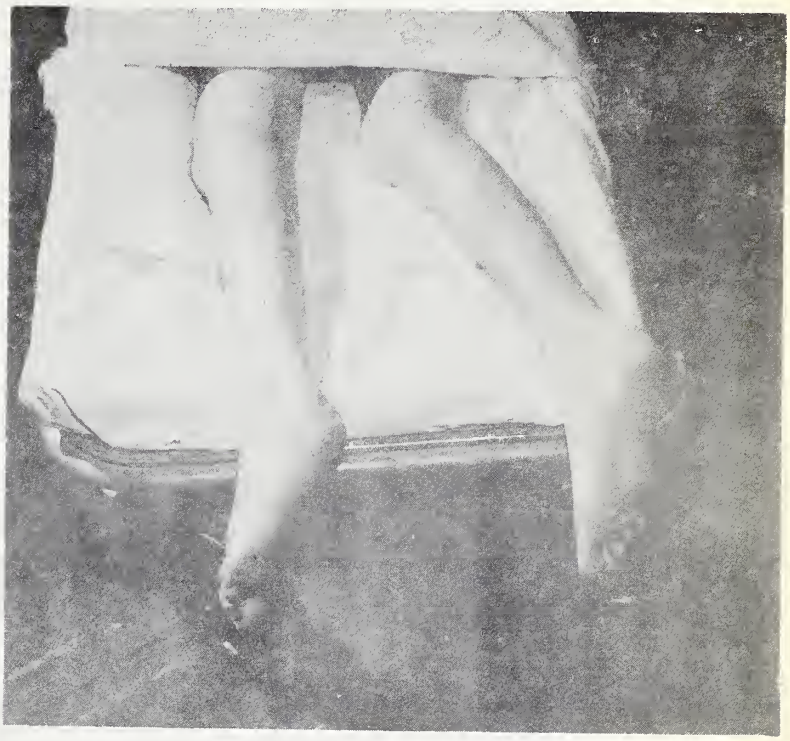
Purpose and Use

The splint is made to fit the foot in its position nearest to 90 degrees of flexion. Gradually the buckles are tightened and the foot is drawn up until it is at a right angle to the leg, - the material bending under pressure without breaking because of free heel. The purpose of the splint is to correct or prevent foot drop. With a night splint of this type, time spent in bed is utilized to improve or maintain physical status and thus hasten rehabilitation.

FOOT SPLINTS

Submitted by: Institute of Physical Medicine and Rehabilitation
400 East 34th Street
New York 16, N. Y.





Source and Cost

Made in the Device Workshop at the Institute of Physical Medicine and Rehabilitation.

Description

The splints are made of fibre glass, molded to the feet while patient lies on abdomen with knees flexed to 90 degrees and feet held with ankles flexed and eversion corrected.

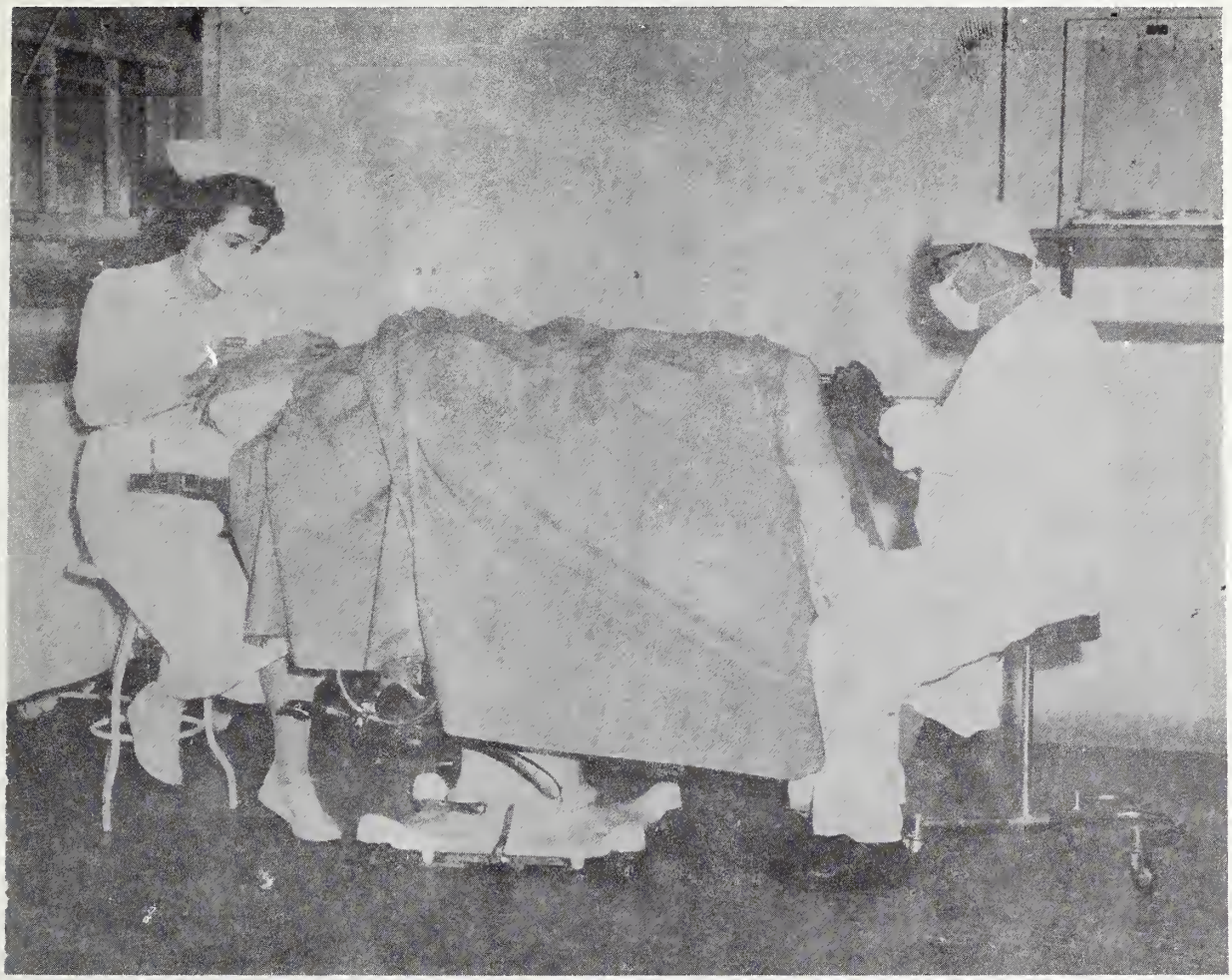
Purpose and Use

The splints have three primary purposes: to correct (1) foot drop, (2) foot eversion or inversion, and (3) improper hip rotation. The attached straps give additional correction to eversion of the foot and rotation of the hip. The splints are intended to be worn at night or during the day while patient is on abdomen.

The splints being molded, pressure is taken equally over the foot and leg area and thus development of pressure spots is prevented. The splints are used when there is paralysis of the lower extremities, as in cases of foot deformity caused by polio or traumatic paraplegia, and especially when proper position has not been maintained before the patient was ready for braces.

SURGEON'S REST STOOL

Submitted by: James E. M. Thomson, M.D.
Lincoln, Nebraska



Source and Cost

Manufacturer and distributor
Orthopaedic Devices, Inc.
1325 Sharp Building
Lincoln 8, Nebraska

Description

The surgeon's rest stool is an adjustable, well upholstered, leather covered, large saddle seat, resting on a single-shaft chromium plated support rising from an anchor-shaped base. The base is mounted on three 5-inch unlocked caster wheels of hard rubber.

Purpose and Use

The stool is intended primarily for a surgeon in the operating room. As the pictures show, the surgeon can sit, stand or move about without leaving the stool.

IT APPLIED FOR. ACCO PRODUCTS, IN
OGDENSBURG, N. Y.